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ABSTRACT

The career education development project presented in the report covers the period from July 1, 1972 through June 30, 1975, with approximately seven percent of the combined school populations of Muskegon and Muskegon Heights, Michigan, participating. The stratified, selected sample was comprised of one experimental group of 202 "target school" students and two control groups of 513 students. The K-12 curriculum was restructured to provide for occupational education, and project classes contained a high percentage of deprived children. An Occupational Development Inventory (ODI) was constructed to measure student achievement in occupational knowledge, vocabulary, planning, interests, attitudes, and values. Scores of control groups and experimental groups were compiled and analyzed, and results are detailed in the evaluation report. Project evaluation, which comprises most of the document, includes a complete set of all instruments used in the project, the pre-post-test procedures, and the test data. Results of the ODI did not indicate any significant improvement in target school student's occupational knowledge. However, as a result of the project, students' understanding of the advantages of school was improved through an increased awareness of the relationship between academic subjects and the working world, and career education activities brought the schools and the business community into a closer working arrangement to promote understanding of employment requirements and vocational potentials for the students. Appended are all K-12 ODI instruments (168 pages). (MF)

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Final Report

Project No. V261009
Grant No. OEG-0-72-5169

A Comprehensive Career Education Development Project for the School Districts of Muskegon and Muskegon Heights

Exemplary Project in Vocational Education
Conducted Under
Part D of Public Law 90-576

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To every person who has in any way contributed to the development and success of the Muskegon Comprehensive Career Education Project---well done.

A sincere thanks goes to a group of people dedicated to the development of a better community and the educational growth of its children and citizens.

ACKNOWLEDGMENTS

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TABLE OF CONTENTS

PAGE

SUMMARY OF THE REPORT 1

Project Goals 1

Procedures 1

Results and Accomplishments. 2

Evaluation 3

Implication & Conclusions 6

BODY OF REPORT 8

The Problem 8

Project Related Literature 9

Project Goals and Objectives 10

General Project Design 11

Schools and Locations. 11

Participants. 13

Procedures 17

Methods and Materials. 18

Results and Accomplishments. 20

Muskegon Career Education Plan. 22

Michigan Career Education Act (Public Law 97). . . . 29

Muskegon Area Placement Services Annual Plan 32

Project Evaluation. 40

Process Audit. 41

Product Audit. 51

(Refer to Evaluation Table of Contents for evaluation reference) 52

REFERENCES 366

SUMMARY OF THE REPORT

School District	Muskegon and Muskegon Heights
Title of Project	A Comprehensive Career Education Development Project
Project Director	Dr. Edward L. Pelkey Comprehensive Career Education Development Project Muskegon Public Schools 349 W. Webster Avenue Muskegon, Michigan 49440 Telephone 616/722-1602 Ext. 53
Period Covered	From July 1, 1972 to June 30, 1975

Project Goals

The intended three year longitudinal curriculum development and support service components of this project have been to (1) develop increased occupational awareness and knowledge among parents, students, and teachers; (2) relate student interests and abilities to appropriate occupational goals; (3) stress the value and importance of work; (4) build understandings as to the need for and qualities required in maintaining good human relationships; (5) establish the relationship of positive acceptance of individual abilities; and (6) provide job entry skills and job placement services for students as they leave the school setting. Further, it has been the intent of the career education project staff to:

1. Develop and initiate a career education curriculum which integrates occupational education concepts into the regular instructional programs in grades K-12.
2. Conceptually view the regular instructional programs as having a significant role in occupational guidance.
3. Evaluate the existing vocational services at the secondary levels to assure that such efforts complement the CCEDP and its goals.

Procedures

Participating in the project have been approximately seven percent of the combined school populations of Muskegon and Muskegon Heights. Non-public school personnel within the boundaries of the project schools have been provided the opportunity to make use of in-service activities as well as curriculum materials and supplies. The career education coordinators provided assistance to non-public personnel involved in developing prescriptions for eligible children attending such schools.

The project director and field staff provided continuing leadership and resources needed to train program participants, prepare curriculum materials, screen and assemble needed materials, supervise the classroom testing of the instructional program, provide for refinements in teaching methods and instructional design, marshall community resources, and focused existing pupil personnel services to complement project objectives.

The basic approach to this developmental project was one characterized by the preparation, field-testing, and refinement of activity-centered units of instruction based upon the concept of occupational clusters which have been integrated into appropriate points of the K-12 curriculum. Teaching units derived from stated objectives and specified appropriate learning activities, resources, materials, and suggested points in the curriculum where particular units of instruction could best be integrated.

Pencil and paper instructional techniques were kept to a minimal level by employing the use of the various media, resource people, problem-centered activity units, field trips, simulation materials and games, "hands on" experiences for students, personal counseling, and other approaches which helped establish a relationship between the school and the occupational world.

Results; Accomplishments

Positive outcomes of the Muskegon Comprehensive Career Education Project, not measured by evaluation instrument, were reflected through observed changes in behavior. Career Education activities brought the community and the public schools together in a revitalized effort to sharing resources. The major advantages which were provided:

FOR THE STUDENT

1. Students were provided with basic reasons for school and learning by looking at his/her own opportunities and responsibilities in the working world.

2. Students were encouraged to exercise a variety of career and educational options, rather than react blindly to happenstance or immediate situations.

FOR THE TEACHER

1. Teachers reported increased motivation by students to learn when career education concepts were employed in the classroom. This provided an increased opportunity for teachers to teach.

2. Individual career interests caused students to accept greater responsibility for his/her own learning. This allowed many teachers more time to provide assistance where needed.

FOR THE SCHOOL

1. For many school staff personnel, career education provided first hand experience with a new basis for educational accountability.

2. Career education provided stronger ties between the community and the school, increasing community support for school programs and needs.

FOR COMMERCIAL AND INDUSTRIAL EMPLOYERS

1. Career education will provide more employees who understand the value of work and the requirement of the work setting.

2. Career education has offered community groups and business people an opportunity to demonstrate their support of the young people in the area and their schools.

Evaluation

The major question that guided the research evaluation was " to what extent did the students who participated in the CCEDP achieve the objectives of the program?" Student outcome objectives were developed for the elementary, junior, and senior high school levels. The student objectives were used to develop the hypotheses to be tested. The hypotheses were:

H_1: Students who participated in the CCEDP program will know significantly more about the worth and importance of occupations, as measured by the Occupational Development Inventory, than students who did not participate in the CCEDP program.

H_2: Students who participated in the CCEDP program will know significantly more about the common characteristics of occupations, as measured by the Occupational Development Inventory, than students who did not participate in the CCEDP program.

H_3: Students who particpated in the CCEDP program will have known significantly more about occupational opportunities, as measured by the Occupational Development Inventory, than students who did not participate in the CCEDP program.

H_4: Students who participated in the CCEDP program will be able to recognize significantly more clearly their own tentative strengths, weaknesses, and interests, as measured by the Occupational Development Inventory, than students who did not participate in the CCEDP program.

H_5: Students who participated in the CCEDP program will know significantly more occupational words and terms, as measured by the Occupational Development Inventory, than students who did not participate in the CCEDP program.

H_6: Students who participated in the CCEDP program will view themselves as significantly more potentially valuable and productive members of society, as measured by the Occupational Development Inventory, than students who did not participate in the CCEDP program.

H_7: Students who participated in the CCEDP program will be significantly more aware of the importance of good interpersonal relationships in general and in job success, as measured by the Occupational Development Inventory, than students who did not participate in the CCEDP program.

H_8: Secondary school students who participated in the CCEDP program will have significantly more knowledge about the educational avenues to career choices, as measured by the Occupational Development Inventory, than secondary school students who did not participate in the CCEDP program.

H_9: Secondary school students who participated in the CCEDP program will be significantly more aware of the relationships between school subjects and the world of work, as measured by the Occupational Development Inventory, than secondary school students who did not participate in the CCEDP prog[illegible]

H_{10}: Students who participated in the CCEDP program will know significantly more about the effect of occupations on personal life style, as measured by Occupational Development Inventory, than students who did not participate in the CCEDP program.

H_{11}: Secondary school students who participated in the CCEDP program will be significantly more aware of occupational decision-making factors, as measured by the Occupational Development Inventory, than secondary school students who did not participate in the CCEDP program.

H_{12}: The parents of students who participated in the CCEDP program will be significantly more aware of opportunities for occupational education in the schools, as measured by the Parent's Questionnaire for the CCEDP, than parents whose children did not participate in the CCEDP program.

The Sample

The research design required the identification of a stratified, selected sample comprising one experimental group of 202 "target school" students, and two control groups of 513 students. The children served represented large proportions of the economically poor, disadvantaged, and minority group segments of the school community.

The Instrument

The Occupational Development Inventory (ODI) was constructed to measure student achievement in four major areas: occupational knowledge, occupational vocabulary, occupational planning, and occupational interests, attitudes, and values.

Statistical Analysis Procedures

1. Analysis of variance was used to determine significant differences between scores of control groups and experimental groups and within experimental groups.

2. Item analysis of all test items.

3. t-tests were conducted to determine significant differences between experimental group scores and control group scores.

4. Chi-square tests were conducted to determine significantly different proportions of responses between experimental and control groups.

5. Analysis of covariance was used to determine significant differences in post-test data when pre-test data revealed significant differences according to the results of analyses of variance.

In testing the hypotheses, differences were considered significant only if $\alpha = .05$ or better.

Findings

Although there were selected test sections where experimental groups had means which were significantly higher than the control group means, there were test sections where control group means were significantly higher than experimental group means. All twelve hypotheses tested failed to meet the .05 level of significance. There was a failure to reject the null hypotheses (Ho).

Implications

The project staff were unable to control a number of variables which affected the evaluation results. In order to qualify for federal funding, the students selected to participate in project activities were required to have the most severe vocabulary, reading, and school attendance problems. If the experimental group had contained a more heterogeneous student sample, one might have expected greater gain scores for the experimental groups. As it was, career education activities were generally in competition for the students' time with compensatory programs such as Basic Reading Laboratory. Although teachers volunteered to work with career education, participation in compensatory educational activities were a vital and necessary requirement as well.

Conclusions

Career education has been successful in developing a closer relationship between a community and its schools. It has been successful in providing a delivery system emphasizing the knowledge, skills, and attitudes people need to explore, understand, and perform their life roles. It has-in fact-been most successful with the school staff.

If career education can now continue to expand to provide assistance to all students, to become a viable concept for operation within special education, community education, vocational education, and counseling, then we can expect increased student self-awareness, career awareness, career decision making, and career planning and placement abilities.

BODY OF REPORT

The Problem

The communities of Muskegon and Muskegon Heights are located on the east shore of Lake Michigan and are the industrialized core of a metropolitan area with a population of approximately 92,000 people. Two out of three persons in the greater metropolitan area live in Muskegon and Muskegon Heights, while the remaining one-third of the population reside in the three adjacent incorporated suburban communities.

The problem area and labor force statistics have not changed significantly since the beginning of the Muskegon Career Education Project activities in 1972. At the close of the project's final year (1974-1975), the economy of the core communities continues to remain in a slump. The Muskegon area has been strongly affected by the recent energy crisis and subsequent reduction in sales, service, and manufacturing. While there are a number of larger heavy industries in the area producing castings, piston rings, etc., almost half of the 2,251 businesses have three employees or less and consist of many small jobbing shops and vendors serving automobile plants in Michigan. The situation continues to produce serious employment problems. In Muskegon County (population 157,000), thirteen to fourteen thousand adults have been identified who are unemployed, underemployed, or whose lack of education places them below the eight grade level. The people with better educations, job security, and adequate incomes continue to move from the inner cities to the suburbs. The poor, the uneducated, and members of minority groups remain. Where there are inadequate incomes, inadequate housing, and inadequate job security, you will find hopelessness, lack of direction, lack of motivation, and lack of aspiration. These are the legacies of the inner-city children.

As such, the educational problems of the core area parallel those described for the economy. Muskegon has approximately 9,000 public school students, 25% of whom come from low-income families: poor White, Black, and Mexican-American. As many as 40 percent of the children are disadvantaged by both state and natural standards in some schools of Muskegon. Muskegon Heights, with a school enrollment of 4,500 students, most of them Black, has problems even more severe. The dropout rate of students remains as high as 55 percent.

To attack the problems described, the Muskegon Public Schools, in cooperation with the Muskegon Heights Public Schools, instituted a pilot program of career education for grades K-12 in seven selected elementary and secondary schools of the two communities. As of this report, career education activities continue in the same schools. Each of the schools involved in the project was selected because they serve a high percentage of disadvantaged students from varied racial backgrounds, living in low-income areas with sub-standard housing and a high incidence of welfare.

In spite of project efforts through the final project year, serious employment problems persist, particularly for youth. Although the CE project has provided youth with CE information and world of work exposure needed to develop basic attitudes, awareness, and skills needed to perform competently in the world of work, it is unrealistic to assume that there will be an increased popularity for hiring the youthful school-aged worker. Jobs are scarce and educational and skill requirements are on the increase. This puts many jobs, with the exception of menial tasks, out of the reach of most high school students enrolled in vocational education. Even here, many students get placed in "short-term" jobs or jobs that they "never really wanted" and quit after a short time.

Project Related Literature

Many studies and related literature were reviewed by the Muskegon career education staff, a select few became instrumental in providing an operational foundation for the project. For example, Venn (1971) indicated that, "Historically, man has based his educational system and preparation for a role in society on a concept of stability (p. 45)." The present generation, however, find themselves engulfed in extreme change. According to Venn, the labor force six years ago moved from a majority in production to a majority in service and distribution occupations. Today 40 percent of the labor force is in production can be more readily handled by machines. Society needs to take a fresh look at changing jobs, new emerging careers, and the whole concept of work and leisure. Venn would suggest that, "It becomes a responsibility of each level of education to assist the individual in making the transition from the educational system to the world of work (p. 46)."

Ginzberg (1971) defined career guidance as structured intervention aimed at helping individuals take advantage of the educational training and occupational opportunities available in the world of work. As every person in our society is constrained to attend school for many years, the school appears as a logical meeting place to consider the type of work and life one would like to pursue, and to make realistic and intelligent decisions based upon those preferences, opportunities, and options available. Career guidance efforts directed toward assisting individuals in becoming aware of the choosing among different types of work and to prepare for work have been viewed as viable components of the Muskegon Public Schools career education project.

Changes are occuring in long-established wage patterns and career opportunities, and unless attention is drawn to these changes, both young people and adults are liable to remain unaware of the forces which are creating new opportunities in the world of work. But caution must be observed. Tiedeman (1963) has stated that making a living must be emphasized as a part of career education if work is not to be over-engrossing or over-emphasized. Tiedeman calls it "making a life (p.4)."

Super (1963) outlined a theory of vocational development in which the self-concept plays a primary role. The development of a positive self-concept has been an important part of the Muskegon project. In essence, the theory suggests that the selection of an occupation and operable skill level selected by a student is a proposition of that student's self-concept. Given the opportunity at any particular moment in time, with any particular set of given inputs such as occupational information and peer group influence, a student may indicate similarities between his own attributes and those members of his selected occupation. According to Vroom (1967), such findings are quite common in social psychology. Investigators have reported a positive correlation between the extent to which a person is drawn to another person or group representing an occupation and the extent to which he describes that person or group as being similar to himself.

So it is that a review of career education oriented studies and literature have provided a foundation in the development of career education goals which are the very same goals which professional educators have been striving toward for years. If we can aid a student in seeing himself as a worthy individual capable of experiencing success, making decisions regarding the values of our work oriented society, developing an understanding of his own talents, and being able to choose from a wide range of alternative paths, we will have done much.

Project Goals and Objectives

The project goals and objectives have been an effective guide during the scope of the project. The major goals for students have been to develop an appreciation and awareness of the worth and importance of occupations, the common characteristics of occupations, occupational opportunities, the relationship of one's tentative strengths, weaknesses, and interests to occupations, and occupational vocabulary, a positive self-concept, more effective human relationships, educational avenues to career choices, relationships between school subjects and work, occupations and life styles, and occupational decision-making. The process goals for the career education teachers, counselors, administrators, parents, and community at large, have been to provide performance based objectives and sufficient activities and opportunities for students to meet their goals.

Process goals developed by the total career education staff were to develop curriculum and support service components which: (1) developed increased occupational awareness and knowledge among parents, students, teachers, and school administrators; (2) assisted students in relating their interests and abilities to appropriate career goals; (3) stressed the value and importance of work; (4) built understandings as to the need for qualities required in maintaining good human relationships; and (5) provided job entry skills and job placement services for students as they leave the school setting. A complete listing of student centered goals are included in the evaluation section.

General Project Design

The K-12 curriculum in target schools was restructured to provide for occupational education. Regularly spaced in-service education was provided all participating teachers, counselors, and administrators. Strong emphasis was placed upon workshop time for curriculum development, consultant services, a continued focus on existing pupil personnel services, and continued support from school leadership personnel.

Schools or Locations

The project was designed to include selected grade levels in each of seven schools: (1) Three elementary schools (K-6); (2) Two junior high schools (7-9); and (3) Two high schools (10-12). These schools are located in two separate, but contiguous, school districts and all serve student bodies which represent a large proportion of the poor, the disadvantaged, and minority groups.

Elementary -- Muskegon Public Schools: Angell and Phillips
Muskegon Heights Public Schools: Lindbergh

Junior High-- Muskegon Public Schools: Steele Junior High
Muskegon Heights Public Schools: Central Junior High

High School-- Muskego Public Schools: Muskegon High
Muskegon Heights Public Schools: Muskegon Heights High

Muskegon Public Schools --Elementary (Grades K-6)

Angell School - Located on a main thoroughfare in the older, inner-city area of the city. Its enrollment numbers close to 800 students, with 70 percent Black, 2 percent Mexican-American, and the rest, White. 40 percent of the students are at the 20th percentile or lower in reading. Turnover in teachers for the last three years has been at the 30 percent level. Selection of the school was based upon such factors as racial composition, low achievement record of many of the students, deprivation, dropout rate, and parent interest and participation in school-sponsored activities.

Phillips School - Located in a blighted area at the fringe of the district. At the time of the Phillips School District annexation to Muskegon in 1967, the valuation per student was $3,000. Roughly 20 percent of the 360 students presently enrolled are of Mexican-American heritage. Community action programs to improve the area have only recently emerged. Citizen involvement in community and school affairs gives promise of a brighter future for the area. The school was selected because of the high dropout rate amongst this school's clientele and the percentage of Chicano children of migrant workers residing in the area.

Walter B. Steele Junior High - Situated in the community so as to receive students from both the elementary schools involved in the project. The school enrollment consists of 1050 students with a racial mix of 65 percent White, 30 percent Black, and 5 percent Mexican-American. The Steele School program includes a broad spectrum of educational offerings in addition to the basic subjects: industrial arts, instrumental and vocal music, physical education (including swimming), pupil personnel services, library services, elective courses, and special education.

-- High School (Grades 10-12)

Muskegon High School - Located centrally to the entire district and serving the total school community at grades 10-12. Enrollment of 1850 students includes 300 Blacks and 60 Mexican-Americans. The school is accredited by the North Central Association and the University of Michigan. 60 percent of the students pursue a post-high school program of studies, 35 percent embarking on programs requiring a minimum of four years of preparation. Cooperative Occupational Training served over 300 students during the 1970-71 school year, and Vocational Education courses enrolled 924 students during the same period. Alternative programs (adult education, high school completion, continuing education, Skill Training Center, etc.) complement the regular day programs.

Muskegon Heights Public Schools -- Elementary (Grades K-6)

Lindbergh School - Located in the inner-city area of Muskegon Heights. It has a Black population at the 99 percent level and has a history of low achievement with more than 60 percent of the students at the 15th percentile or less in reading and math. Total enrollment is 440 students. Parents are interested in improved educational offerings and stand ready to assist the school in upgrading the program to the advantage of parents and students.

-- Junior High (Grades 7-9)

Central Junior High School - Located in the center of the district and serving all youngsters of the district at this level. Enrollment numbers 860, of which 94 percent represent Black and Mexican-American origins. Opportunities for exploratory occupational experiences and training are limited. Motivation for the world of work is minimal for a significant number of students.

-- High School (Grades 10-12)

Muskegon Heights High School - Located in the center of the district and serving all youngsters of the district at this level. Enrollment is 690 students, of which 88 percent are Black, 2 percent are Mexican-American, and 10 percent are White. Attrition rate is at a very significant level. Approximately 60 students are served by the Cooperative Occupational Training program and 64 are enrolled in Vocational Education courses. Only 30 percent of the graduates pursue a post-high school education.

Participants

The classrooms which have been involved in this project were selected according to the following criteria:

1. Project classrooms contain a high percentage of deprived students. Such students are typically low achievers, members of minority groups, and (or) from depressed socio-economic levels. For identification purposes, government standards for deprivation and the results of State and local testing were applied.

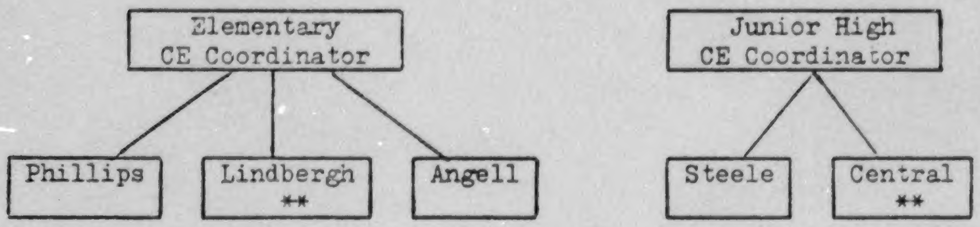
2. Classroom teachers were chosen on the basis of their educational qualifications, plus their interest in and commitment to the carrying out of the project. All CE teachers have been volunteers.

Of the approximately 14,000 students attending the Muskegon and Muskegon Heights school systems, about 772 have participated in the project. A breakdown of project participants is as follows:

Muskegon Public Schools
K-12 System

Number of students-8957

(12) K-6	(2) K-9	(1) 7-9
No. of students 4343	No. of students 1778	No. of students 1012


Elementary CE Coordinator
Junior High CE Coordinator
Phillips
Lindbergh **
Angell
Steele
Central **

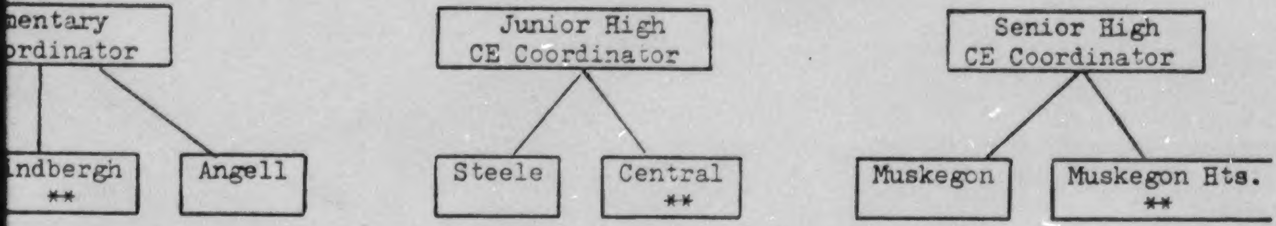
	Phillips	Lindbergh **	Angell	Steele	Central **
No. of teachers	3	4	4	6	4
No. of students	98	99	94	130	72
No. of counselors		1		1	1

** Muskegon Heights Public Schools

Muskegon Public Schools
K-12 System

Number of students-8367

K-9	(1) 7-9	(1) 10-12
of students 1778	No. of students 1012	No. of students 1734



mentary
ordinator
Junior High
CE Coordinator
Senior High
CE Coordinator
indbergh
**
Angell
Steele
Central
**
Muskegon
Muskegon Hts.
**

indbergh **	Angell	Steele	Central **	Muskegon	Muskegon Hts. **
4	4	6	4	7	3
99	94	130	72	175	104
1		1	1	2	1

Instructional Staff

Elementary -- Mrs. Marcia R. Howe, Coordinator

Grades - K-6

Number of buildings - 3

Number of students - 291

Number of staff
3 principals
1 project coordinator
1 para-professional
11 teachers:

Robert Cotner	Angell	Grade 6
Dianne Craymer	Phillips	Grade 2
Bernice Cwynar	Lindbergh	Grade 2
Paula Doig	Angell	Grade 4
Dale Dykema	Lindbergh	Grade 4
Pat Howard	Angell	Grade 2
Pauline Kelley	Lindbergh	Grade 3
Ruth Nelson	Phillips	Grade 3
Venus Nichols	Angell	Grade 5
Marian Poole	Lindbergh	Grade 1
Carolyn Rork	Phillips	Grade 1
Jesse Turner	Lindbergh	Counselor

Junior High -- Mr. Paul W. Vanderstelt, Coordinator

Grades - 7-9

Number of buildings - 2

Number of students - 202

Number of staff
2 principals
1 project coordinator
1 para-professional
2 counselors
9 teachers:

Dorothy Blackmon	Heights	Grade 7 - English
Al Davis	Heights	Grade 7 - Phys. Ed. (Boys)
Lee Flegel	Steele	Grade 8 - Science
Helen Funk	Steele	Grade 8 - Home Economics
Martha Giacobassi	Steele	Grade 9 - English
John Noling	Steele	Grade 7 - Math
Wayne Shook	Heights	Grade 8 - Science
Rosie Thornton	Heights	Grade 7 - Clothing
Ray Wheeler	Steele	Grade 7 - History

Bill Cross	Steele	Counselor
James McKinney	Heights	Counselor

Senior High -- Mr. David R. Justian, Coordinator

Grades - 10-12

Number of buildings - 2

Number of students - 279

Number of staff
2 principals
1 project coordinator
2 counselors
1 placement specialist
11 teachers:

Shirley Albers	Muskegon	Grade 11 - American History
Homer Allen	Heights	Grades 11-12 - Auto Mechanics
Dorothy Carlson	Muskegon	Grade 11 - English
Byron Comin	Muskegon	Grade 12 - Senior Soc. Studies
Dick Edstrom	Muskegon	Grades 10-12 - Graphic Arts
Dan Morrison	Heights	Grade 9 - Electricity
Don Vokits	Muskegon	Grades 10-12 - Welding and Elec.
Chris Wainwright	Muskegon	Grades 10-12 - Basic Art
Theron Wierenga	Muskegon	Grade 12 - Physics
Carol Zuvers	Heights	Grade 9 - Phys. Ed. (Girls)
Kenneth Kolberg	Muskegon	Counselor
James Sikkenga	Heights	Counselor
Joyce Kastas	Muskegon	Adult Placement Coordinator

Non-public school children who live within the boundaries of project schools were given the opportunity to make use of program materials and supplies. The coordinators also offered cooperative in-service opportunities for non-public school teachers and assist with developing educational prescriptions for eligible children attending such schools.

Procedures

At the elementary level, the career education thrust was incorporated as part of the existing curriculum which has capitalized on the natural curiosity of children in the adult occupational world. By use of small group field trips, classroom visitations by people representing many facets of work, and by role playing and simulation games, considerable opportunity was given for elementary students to explore the vocational aspects of life.

In the junior high grades as well, career education curricular materials, field trips, and role models were used to expose students to the world of work. Teachers demonstrated to students the casual relationship between what is learned in school and what will happen to them later in the world of work. Great emphasis was placed upon the tremendous problems which can occur due to dropping out of school. Junior high students were encouraged to take a look at their own interests and abilities and to relate them to the world of work. Junior high students further encouraged to plan their academic and vocational courses with more care.

At the high school level, curricular efforts were focused more specifically on career decision-making and preparation for fulfilling occupational interests. Students were encouraged to engage in specific individual research into potential areas of occupational interest. Teachers also presented the decision-making process as a model--a model which contains sequential steps one must proceed through in order to arrive at one's best decision. Field trip opportunities, career education materials, role models, and simulated career problems played a large part as well.

The following list of tasks best represents the major activities which took place at each level of the project and which are considered to be necessary to any measure of success.

1. Selection of director and coordinators
2. Planning sessions with central administrative staff and consultants.
3. Orientation and planning sessions with local commerce, industry, and manpower agencies
4. Orientation meetings with administrators of participating schools
5. Establish curricular writing teams.
6. Collect curriculum materials and models from on-going programs in career education in other districts.

7. Review curriculum materials and models in career education in preparation for curriculum workshop for participating staff members

8. Establish advisory or "ideas" committees to meet monthly during first year, bi-monthly thereafter

9. Establish communication and consult with other districts operating career education programs on a continuing basis

10. Develop or obtain evaluation instruments.

11. Conduct continuing curriculum development workshops and in-service sessions for participating staff members

12. Disseminate career education information continuously on a school and community wide basis.

13. Evaluate activities on a periodic basis

14. Adjust activities in relationship to continuing evaluation data .

Methods and Materials

The basic approach to this developmental project was one characterized by the preparation, field testing, and refinement of activity-centered units of instruction based upon the concept of occupational clusters which have been integrated into appropriate points of the K-12 curriculum. Teaching units derived from stated objectives and specified appropriate learning activities, resources, materials, and suggested points in the curriculum where particular units of instruction could best be integrated.

The project director and his field staff provided continuing leadership and resources needed to train program participants, prepare curriculum materials, screen and assemble needed materials, supervise the classroom testing of the instructional program, provide for refinements in teaching methods and instructional design, marshall community resources, and focus existing pupil personnel services to complement project objectives.

The intent of the project was to keep "pencil and paper" instructional techniques to a minimal level, and employ the use of the various multi-media, resource people, problem-centered activity units, field trips, simulation materials and games, "hands on" experiences for students, personal counseling, and other approaches designed to help establish a relationship between the school and the occupational world.

Typical types of materials, resources, and equipment which were used in this project are as follows:

Audio-visual materials for occupational education

Displays
Films
Filmstrips
Microfiche
Projectors
Tapes, records, and record players
Transparencies
Flannel boards and chalkboards

Printed Materials

Books about occupational career choices, etc.
Employment security publications
Magazines and newspaper articles related to careers
Pamphlets
Professional product kits of occupational briefs such as careers and SRA kits
Occupational briefs from professional technology
Textbooks

Occupational orientation activities

Career games
Models
Mock-up
Puzzles
Simulated materials

Department of Labor publications

Dictionary of Occupational Titles
Employment Security Trends
Job Guide Book for Young Workers
Occupational Outlook Quarterly

Guidance materials

Guidance kit for elementary counselors and teachers
Professional guidance series booklets
SRA guidance series
Duso Kits I & II

Keys to vocational decisions, grades 8-12
Career information kits, grades 10-12
Careers for high school graduates, grades 7-12
Careers for women, grades 7-12
Job Family series, grades 9-12

Testing

Testing achievement, grades 1-12
Testing ability, grade 1-12
Testing aptitudes, grades 3-12
Testing personal preference and interest, grades 6-12

Instruments and Techniques Used

A pre-post test evaluation of the career education target populations was conducted utilizing both interview and paper-pencil techniques. A complete set of all instruments developed for the Muskegon project may be found in the evaluation section. A report of pre-post test procedures and a description of pre-post test data has been prepared by the third-party evaluators and may be found in the evaluation section. A copy of the specific student objectives developed for this project may also be found in the evaluation section.

Results and Accomplishments of the Project

Government, labor, business, and education have traditionally traveled their separate ways. Career education has become the vehicle that has created a partnership between these segments of society in helping students to cope in their life role of living, learning, and working. A close working relationship now exists between the Muskegon area schools, the Muskegon Area Development Council-Chamber of Commerce, and the Michigan State Chamber of Commerce. Resource teams have been organized. Active and retired chamber members will be going into the schools to discuss careers with students and to provide them information on various occupations, including training involved, salaries provided and other aspects. Arrangements are also being made to provide students an opportunity to visit business concerns engaged in the activity in which they are interested.

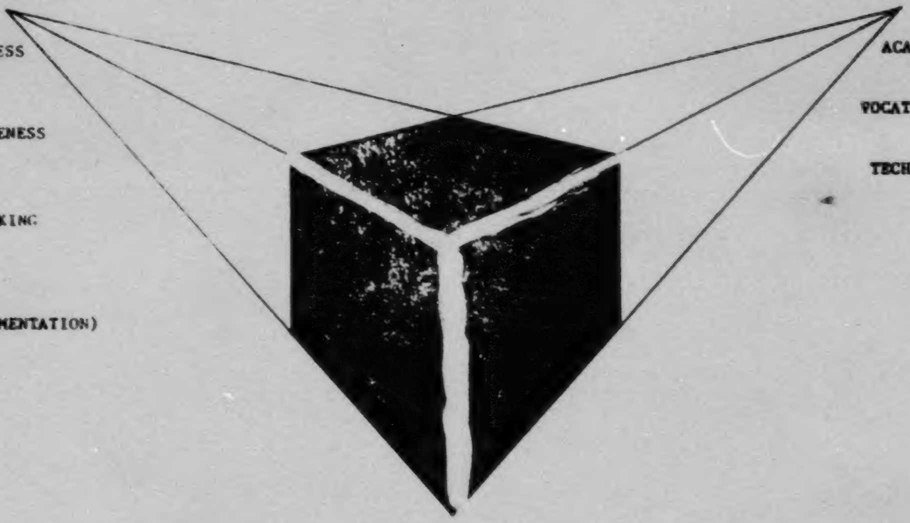
The goals of the partnership will be to (1) amass the resources of business, industry, education, labor, and government in a collaborative effort to reduce unemployment and promote a full employment climate; (2) to promote and maintain effective lines of communication between business, education, government, industry, and labor; and (3) helping Muskegon Area students to better understand the career options available to them.

The career education project seed money has also provided the opportunity for two major school systems to work together. The Muskegon and

Muskegon Heights School Districts border each other. As the CE staff was composed of personnel from both school systems, many friendships were developed, problems shared, and ideas exchanged. And above all, the pooled efforts and educational resources of both school systems were directed toward increased educational opportunities for all children in the Greater Muskegon Area.

The State of Michigan has moved far in advance of many other states in the field of career education. The Muskegon CE Project personnel have worked closely with state and project personnel by participating in committee activities which have defined and organized a framework for career education within the State of Michigan. Because of the close working relationship, the Muskegon area schools will now be able to continue the development of the skills and knowledge through which individuals may fulfill their own unique needs with regard to their occupational role, citizen responsibility, leisure activity, and family development. Included at this point are some of the major components of career education which will be continued by the Muskegon area schools. Also included is a copy of the mandatory career education law (Public Law 97) for the State of Michigan.

CAREER EDUCATION



CAREER DEVELOPMENT

SELF AWARENESS
and
EXPLORATION

CAREER AWARENESS
and
EXPLORATION

DECISION MAKING
and
PLANNING

PLACEMENT
(GOAL IMPLEMENTATION)

CAREER PREPARATION

ACADEMIC EDUCATION

VOCATIONAL EDUCATION

TECHNICAL EDUCATION

AN INTEGRATED APPROACH

NEEDS ASSESSMENT

A. Review the roles that the school may currently be performing in career education.

B. Assess school staff prerequisite skills, knowledge, and abilities needed to conduct career education activities.

C. Determine those personnel needs related to career education which will have to be addressed through an in-service program.

MAJOR COMPONENTS

A. Inform the school and community about career development and career preparation.

B. Assist students in the identification and selection of school programs and courses.

C. Provide school experiences which contribute to the development of career planning skills.

D. Provide assistance to students seeking employment and/or further education.

E. Collect and provide Career Education Program follow-up data which can contribute to planning and improvement.

COMPONENT A

Inform the school and community about Career Development and Career Preparation activities.

OBJECTIVE

Students, staff, parents, and patrons will be able to identify and discuss the Career Development and Career Preparation activities available to all persons residing within the Muskegon Public School District. (Refer to Michigan State Department of Education Model on following page.)

C.E. COORDINATOR RESPONSIBILITIES

1. Conduct school personnel in-service career education orientation sessions.
2. Encourage the participation of community organizations.
3. Bring the community into the schools by way of "open houses" and "career nights."
4. Disseminate information through the mass media.

COMPONENT B

Assist students in the identification and selection of school programs and courses.

OBJECTIVE

Having been given the opportunity to attend career education seminars, counseling, and testing, students will be able to choose courses and activities they recognize as being career relevent for them.

C.E. COORDINATOR RESPONSIBILITIES

1. Assist school staff in identifying students' interests for enrollment in programs and courses.
2. Assist in the orientation of students about occupational and educational opportunities.
3. Provide C.E. information to support educational programs planned by students.

COMPONENT C

Provide school experiences which contribute to the development of career planning skills.

OBJECTIVE

Identify and make available, to school staff, the material and people resources which can clarify school - work relationships for students.

C.E. COORDINATOR RESPONSIBILITY

1. Assist in relating subject matter to the world of work by curriculum infusion. Allow parents to help.
2. Maximize learning opportunities on career field trips.
3. Develop career resource centers.
4. Assist students in confirming career decisions.
5. Form career discussion groups which make use of simulation, games, problems, and case studies.
6. Provide arrangements for students with special needs.

COMPONENT D

Provide assistance to students seeking employment and/or further education.

OBJECTIVE

Given the assistance of all school personnel involved in academic, career, and placement counseling, students will be provided appropriate counseling and individual assistance to continue educational opportunities and/or obtain a job.

C.E. COORDINATOR RESPONSIBILITY

1. Assist in the development of a school placement office.
2. Assist in developing contacts with employees, educational admissions officers, and community organizations.
3. Assist in the development of a school student placement file.
4. Assist in helping students prepare to apply for a job.

COMPONENT E

Collect and provide career education follow-up data which can be used in curriculum planning and improvement.

OBJECTIVE

Collect evidence which contributes to knowledge about student competence in career education as well as program planning to increase student competence.

C.E. COORDINATOR RESPONSIBILITIES

1. Include total school staff in planning follow-up procedures.
2. Solicit follow-up information from former students.
3. Obtain follow-up information from universities, technical training schools, and employees.

Public Law 97

STATE OF MICHIGAN
77TH LEGISLATURE
REGULAR SESSION OF 1974

Introduced by Reps. Dively, Nelson, McCollough, Smart, Geerlings, Kildee, Bennett, Hellman, Vaughn, Smith, Bryant, Mowat, F. Robert Edwards, Engler, Kehres, Crim, Montgomery, Elliott, Smit and Jowett
Reps McNeely, Keith and Stackable named as co-sponsors.

AN ACT to promote the planning and development of career education programs; to create a state career education advisory commission and local career education planning district councils and to prescribe their powers and duties; and to prescribe the powers and duties of certain state departments and agencies.

The People of the State of Michigan enact:

Sec. 1. This act shall be known and may be cited as the "career education act."

Sec. 2. As used in this act:

(a) "Career education" means programs for K-12 students designed to create career awareness, orientation, exploration, planning, preparation, and placement, to maximize career options available, and to provide comprehensive career development. In addition, "career education" shall provide for the full development of students to gain maximum self-development and fulfillment from career preparation and choice, and to maximize the capabilities of students to explore, analyze, prepare for, gain entry to, and succeed in career choices.

(b) "Career education planning district" means a group of local educational agencies, including local school districts and intermediate school districts, in geographic proximity to each other and organized to increase cooperation and articulation between local educational agencies as they plan to implement a career education program.

(c) "Local educational agency" means local school districts and intermediate school districts and their boards.

Sec. 3. The career education advisory commission, hereafter called the commission, is created in the department of education. The commission consists of 20 members of which not more than 1/2 shall represent the education profession. The members shall be appointed by the state board of education for terms of 2 years, except that of the members first appointed, 10 members shall be appointed for 1 year and 10 for 2 years. The state superintendent of public instruction or his designated agent shall be a nonvoting, ex officio member and shall serve as chairman. The commission membership shall include representatives of labor, business or industry, a noneducational state governmental agency, local and intermediate school board members and administrators, a community college district, a 4 year college or university, a neighborhood education authority, the state advisory council for vocational education, parents, teachers, counselors, and students.

Sec. 4. (1) The commission shall evaluate current state, regional, and local efforts toward career education and shall submit to the state board of education its findings.

(2) The commission shall recommend to the board guidelines and performance objectives for a comprehensive career education program.

Sec. 5. (1) The state board of education shall recommend statewide guidelines and goals for a comprehensive career education program not later than 9 months after the effective date of this act.

(2) The board in consultation with the commission and teacher training institutions shall develop a plan for professional personnel development to assure successful implementation of career education in all local educational agencies. The professional personnel development plan shall provide for the systematic development of all professional personnel at both the pre-service and in-service levels and the criteria for assessing the performance of these professional personnel.

Sec. 6 (1) The state shall be divided by the state board of education into career education planning districts. A planning district shall be structured to increase communication, cooperation, and planning among its member educational agencies and to coordinate and promote career education programs in the district. The number and boundaries of career education planning districts shall initially be as established on January 1, 1974, and be reviewed annually by the state board of education based upon criteria to include the following:

(a) Existing intermediate school districts.
(b) Geographical proximity of local educational agencies to one another.
(c) Student enrollment.
(d) Compatibility with service area boundaries of local educational agencies.

(2) A planning district shall be served by a career education planning district council whose membership shall be recommended by local educational agencies within the district and selected on or before January 1, 1975, by the intermediate boards of education in which they are constituent. Membership shall not exceed 20, of which not more than 1/2 shall represent the education profession, and shall include representatives of local and intermediate board members and administrators, the arts, business or industry, a labor organization or manpower agency, parents, teachers, counselors, and students. All other local educational agencies shall be represented as nonvoting, ex officio members on the council serving their area of the state. A career education planning district council shall develop annually, beginning September 1, 1975, a comprehensive, cohesive, and well-coordinated career education plan, utilizing the guidelines recommended by the state board of education.

Sec. 7. Beginning with the 1975-76 school year each local educational agency shall have a comprehensive career education plan and shall establish performance objectives. Each local educational agency shall annually thereafter evaluate and make recommendations for its comprehensive career education program utilizing guidelines and goals recommended by the state board of education, the planning district's plan, and the local educational agency's performance objectives and plan.

Sec. 8 The department of education, in cooperation with other agencies, shall periodically compile and make available to career education planning districts and local educational agencies information pertaining to current and future job opportunities.

Sec. 9 The department of education shall provide to the legislature and the governor by February 1, 1975, an estimate of the cost of implementing a comprehensive career education plan for the state.

This act is ordered to take immediate effect.

(Bill signed by Governor Milliken on Tuesday, May 7th, 1974)

[Provided by Michigan Occupational Education Association]

Area placement opportunities for students have been greatly expanded due to the relationship established between the Muskegon Comprehensive Career Education Project and the Central Placement Coordinating Department of the Muskegon Area Intermediate School District.[1] Career Education Planning District #21 (CEPD), consisting of Muskegon and Oceana Counties, has developed and area-wide placement concept known as Centralized Placement Program Management. It has provided for overall program management and coordination of graduate placement, Co-op, youth employment, work-study, and special education programs, working from a central location with an overall coordinator. Centralized placement has provided a single point of contact for employers, educators, and parents.

Centralized administration and de-centralized operations have been the chief features of Centralized Placement Program Management (CPPM). The centralized administration feature has provided program direction, student selection criteria, inter-program evaluation, budget preparation and analysis, labor market studies, industry-business-education cooperation, area-wide job development, a career information and technical information center, as well as a means of disseminating such information.

De-centralized operation has been the function of the local school district. Each of the 16 high schools in the CEPD #21 area have a Placement Implementor assigned. The purpose of the Placement Implementor has been to begin a placement process which will ultimately involve every guidance counselor assigned in each of the schools. The operation of placement activities at the local level have included: identifying student job interests and needs, providing specific information to students concerning job openings which include requirements for those jobs, working conditions, wages, how employers hire, etc. The local school placement personnel arrange interviews for their students and graduates, brief them on how to conduct themselves, how to fill out job application forms, and similar matters. They also monitor the outcome of interviews and follow up students placed and not placed.

It has also been the task of the Placement Implementor in each local school district to screen applicants for the various programs, both to insure that all students are aware of their options in these programs and that they are provided mobility among the programs.

Included at this point are the goals and specific objectives of the local level High School Placement Office Annual Plan.

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[1] Mr. Thomas Willi

Central Placement Coordinator

Muskegon Area Intermediate School District

1611 Oak Avenue

Muskegon, Michigan 49441

CAREER EDUCATION PLANNING DISTRICT #21

MUSKEGON - - - - OCEANA

COUNTIES

PLACEMENT SERVICES

ANNUAL PLAN

Muskegon Area
Intermediate School District
Central Placement Office
1611 Oak Avenue
Muskegon, Michigan 49442

Thomas Willi
Coordinator

Roger Schecter
Placement Specialist

HIGH SCHOOL PLACEMENT OFFICE

ANNUAL PLAN

AND

GOAL STATEMENTS

I. Employment Services

Goal

Provide direct and indirect employment services to graduates and students desiring or needing help in securing employment.

Obj. 1.1	Post all known job openings in a conspicuous place so that all job seekers have equal access to known job openings.
Obj. 1.2	Interview job seekers in order to determine their interests, abilities, and motivation for employment.
Obj. 1.3	Refer job applicants, after interview, to known job openings or to employers known to hire in specific occupational categories or to other agencies active in placement or special programs.
Obj. 1.4	Establish a system for the identification, counseling, and placement of drop outs and potential drop outs into viable programs offering alternatives to the regular school programs such as YEP, Work Study, and Part G Co-op.
Obj. 1.5	Maintain record of all placement activities including applicants, interviews, referrals, and placements for purposes of evaluation and reporting.
Obj. 1.6	Recommend students for Co-op using current established procedures.
Obj. 1.7	Establish procedures for disseminating, to all students, information about the various work experience options available to them.

II. Career Counseling and Guidance

Goal

Provide career guidance to students and graduates to help them make decisions about jobs, occupations, further schooling, or vocational training.

Obj. 2.1 Maintain a Career Information Center using various media which describe careers, occupations, and other information pertinent to selecting and seeking a career, occupation, or job.

Obj. 2.2 Provide individual counseling concerning careers, occupations, and jobs to students and graduates.

Obj. 2.3 Conduct small group seminars or rap sessions with students concerning all aspects of finding a job and developing a career.

III. Program Selection

Goal

Establish a placement screening committee to select students for the various work experience programs available to the school.

Obj. 3.1 Screen applicants for initial entry into Co-op, Work Study, or YEP in accordance with the criteria established for each program using the procedures prescribed by the appropriate program manager.

Obj. 3.2 Follow-up on students in YEP and Work Study programs and provide a means of student mobility from them into Co-op.

Local High School

PLANNING CHECKLIST

Do you provide a coordinated employment placement service for students and former students? ______________

If no, how is the placement function achieved? ______________

If so, what are these services? ______________

Full time employment upon completion? ______________

Placement of former students? ______________

Cooperative education employment? ______________

Other part time or temporary employment? ______________

Other? (specify) ______________

Who is responsible for the placement function? ______________

What staff time and funds are allocated to insure its implementation?

____

How is it organized and coordinated within your institution? ______________

____

How does it reach the individual student in his school or place of employment? ______________

How is it coordinated with the employment placement activities of other organizations similarly engaged? ______________

How are employment requests and placement information recorded and communicated? ______________

(a) What quantitative information do records provide for the past year? ______________

(b) For previous years? ______________

Is there a follow-up on employment placements? ____________________

If yes,

(a) How is this accomplished? ____________________

(b) What information is sought? ____________________

(c) How are the follow-up results used? ____________________

Is the placement function closely coordinated with the counseling and guidance and student recruitment functions? ____________________

If so,

(a) How is this achieved? ____________________

(b) What are the advantages or disadvantages of such coordination?

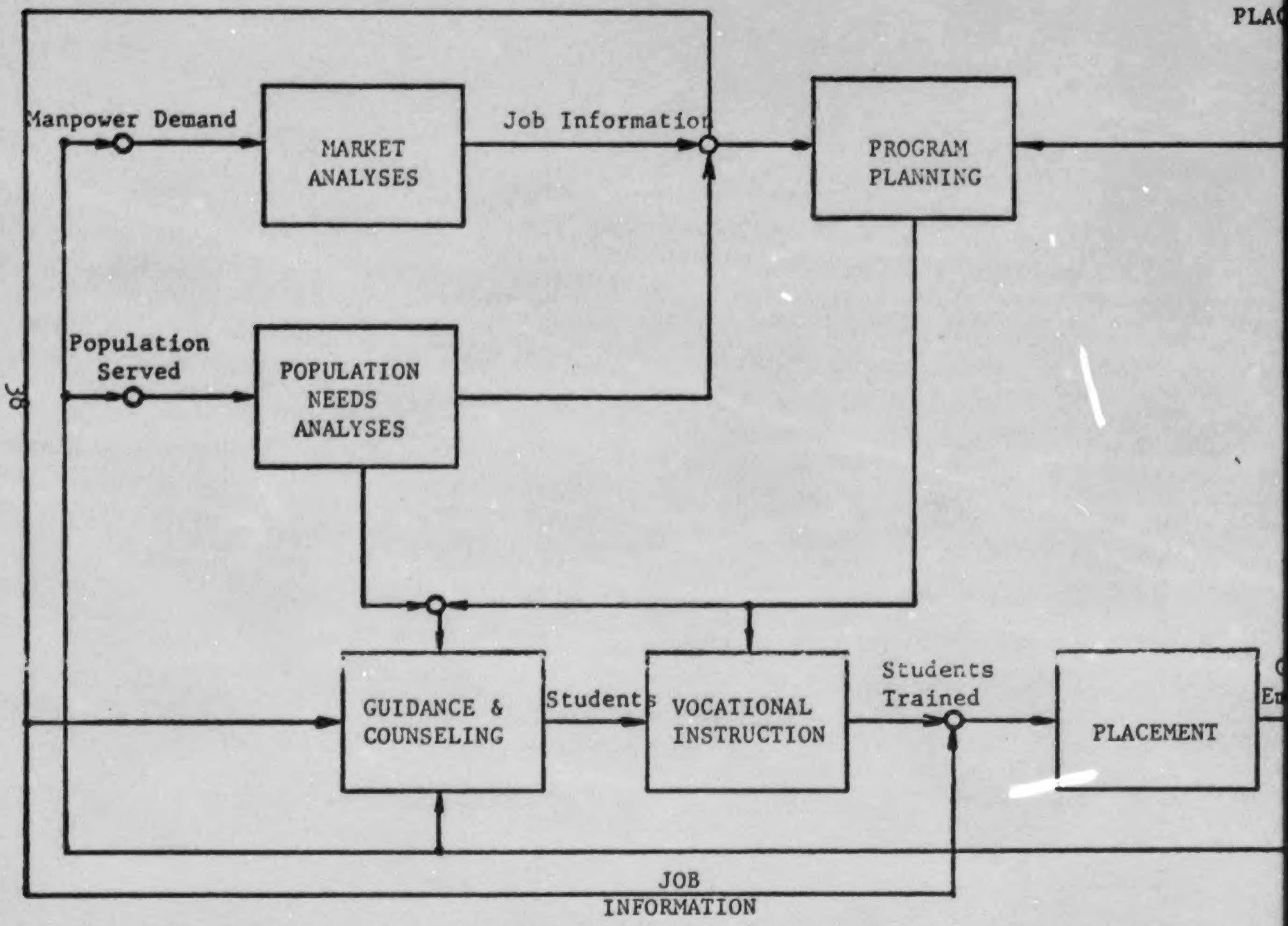
____

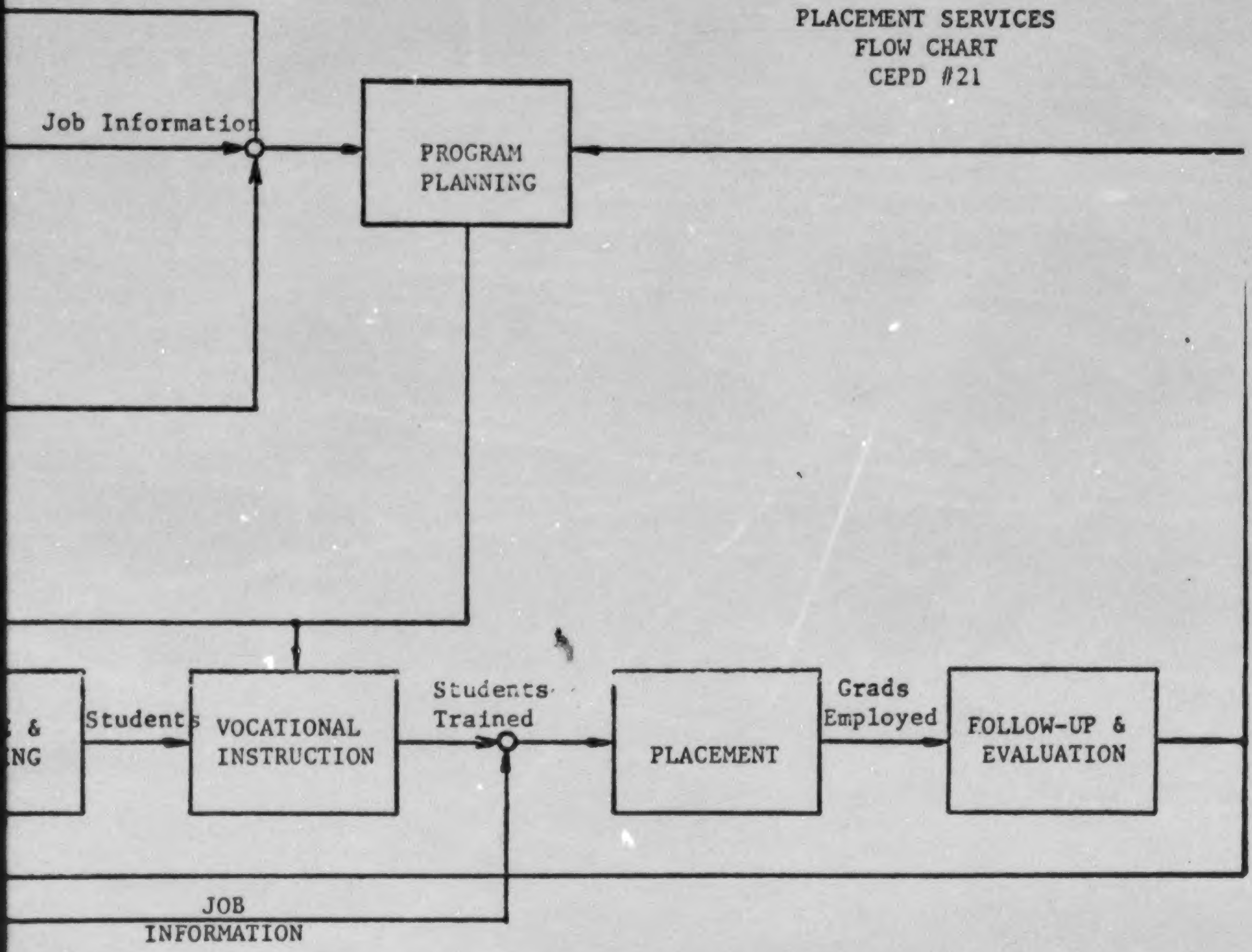
Have you specified measurable objectives or measurable outcomes for the placement function? ____________________

If so, what are they? ____________________

Have they been (or will they be) achieved? ____________________

If not achieved, what is being done or planned to facilitate their achievement? ____________________


PLAC
Manpower Demand
MARKET ANALYSES
Job Information
PROGRAM PLANNING
Population Served
POPULATION NEEDS ANALYSES
38
GUIDANCE & COUNSELING
Students
VOCATIONAL INSTRUCTION
Students Trained
PLACEMENT
JOB INFORMATION


PLACEMENT SERVICES
FLOW CHART
CEPD #21

Job Information
PROGRAM PLANNING
&
ING
Students
VOCATIONAL INSTRUCTION
Students Trained
PLACEMENT
Grads Employed
FOLLOW-UP & EVALUATION
JOB INFORMATION

Definitions of terms used by the Central Placement Project.

1. Direct Placement Services.

These services which a placement counselor provides direct to job applicant on a one-to-one basis. These include tutoring pre-employment skills, counseling, interviewing, and referral direct to an employer for a specific job opening.

2. Indirect Placement Services.

These services which a placement counselor provides on a wide scale and relys on the individual initiative to produce the desired result. These services include the posting of known job openings, the distribution of information regarding employment, occupations, career information, pre-employment skills and conducting group employment counseling or job finding clinics. The actual job search is performed by the job applicant.

3. Placement Support Services

Those management and administrative services performed by the Central Placement Office which supports the direct and indirect placement services performed at each local high school. These include the development and issuance of all forms, applications, check lists, promulgation of known job openings on a weekly basis with daily up-date, coordination with other agencies and employer groups, preparation of labor market studies, maintenance of certain labor and occupational statistics, publication of reports and brochures, interface with the MESC.

4. Centralized Placement Program Management (CPPM)

A management scheme which provides centralized administration and coordination of all Work Experience/ placement oriented programs through a central office and decentralized operation of these programs at the local high school level.

Providing specific job entry skills is always a difficult and expensive goal to accomplish. Adequate funds were not budgeted within the total career education project to purchase materials and equipment necessary to provide entensive career development and skill training required for "specific" entry level jobs. It is usually difficult for any secondary institution to keep pace with the rapid equipment and operational changes required in industry.

However, great strides have been taken by Muskegon's Vocational Education Department. Specific training for job entry has been provided for many years in such areas as Machine Shop, Cast Metals, Auto Mechanics, Electronics, Graphic Arts, and Welding. General shop experience at the junior high level, as well as the high school level, is also being offered to all students to allow them to explore careers. Classes such as Machine Shop, Cast Metals, Plastics, Metal Work, and Graphic Arts are conducted on a ten week basis. This allows a student to select four different career areas for exploration during one school year. The response by students to this approach has been very positive. The vocational education department will continue to increase the courses offered as staff and budget will allow.

At the same time, it is recognized that the job skill alone will not guarantee initial employment and job success. The career education project has provided the opportunity for a concentration on the "worth of work" and "job attitude" as being vital components to career success. This concentration will continue after the termination of the project. All school staff recognize the fact that there is more to solving the problem of unemployed youth than allowing the student to think, "Well, now that I can run a machine, I should be able to get a job." It is recognized that labor laws, labor union entrance criteria, and a deflated job market will continue to make student placement difficult.

Evaluation

The third-party process and product evaluations have been included in the final report at this point. The process audit is presented first, followed by the product evaluation.

MUSKEGON CAREER EDUCATION PROJECT AUDIT

April 14 - 15, 1975

The April audit of the Muskegon career education project was divided into two separate parts. First, each teacher in the project who was in attendance on April 14, and 15, 1975 was interviewed by one of the process evaluators with particular attention given to the following areas:

1. What did members of the Career Education Project Central Office Staff do that was of the greatest help to you? (inservice - materials - kits - field trips - role models, etc.)
2. What help did you want, but did not get from:
    a. Central Office Career Education Staff
    b. School System Central Administration Staff
    c. School building administration
3. If you could start over, what would you do differently?
    a. As the project organizer
    b. In starting a career education class

For the second part each career education project teacher was provided with a questionnaire with nine questions to be completed and mailed in to the evaluators within the next week (see Exhibit # 1). The evaluators summarized these results for the questionnaires which were returned.

Part I teacher reactions are summarized as a combined report. (A separate summary is attached for each coordinator for the area coordinated i.e. Elementary, Junior High, High School).

Part II teacher reactions were listed and tabulated under the questionnaire headings. From this tabulation the summary comments were identified by number to correspond with the question answered. A copy of the tabulation is included in this package, but is intended as detailed information rather than as a part of the audit report.

SUMMARY OF RESULTS OF TEACHER INTERVIEWS

MUSKEGON CAREER EDUCATION PROJECT
April 14 - 15, 1975

Inservice

Workshops were generally evaluated as very worthwhile by most teachers.

Workshops provided orientation information, ideas for teaching methods and philosophy and a base for understanding the importance of self concepts.

Many of the high school teachers would have preferred that the inservice program begin before school started in September.

Almost all teachers indicated that dialogue with other teachers was very helpful.

> Many indicated the desirability of more dialogue with other teachers.
>
> Grade level meetings were appreciated by elementary teachers.

Many career project teachers expressed appreciation for having had time to think and plan.

Visits to other school systems career education programs were sincerely appreciated by those who had an opportunity to participate, but less than half had been privileged to visit other school systems with career education projects.

The availability of the coordinators for personal contacts with teachers was appreciated.

> After school meetings at the building with the elementary coordinator was identified as a real help by many elementary teachers.

Most teachers mentioned with appreciation the personal encouragement and motivation from the Central Career development staff.

Many teachers appreciated the availability of consultant help.

Materials

The wealth and variety of materials provided were very helpful for teachers.

The opportunities to see and study materials were valuable experiences for career education project teachers.

Materials - continued

Developing instructional materials helped several individuals with their planning and organizing of their thinking.

The provision of time for planning how to use materials and for the research of materials was appreciated by many teachers.

Most elementary teachers felt that the materials provided were very good.

Few teachers indicated that they had not been involved in developing materials.

More emphasis on the development of materials was noted during the first years of the project.

Kits

Reactions to Kits varied some from elementary to secondary teachers.

More than half of the elementary teachers felt that the kits of materials were very good.

Favorable comments indicated that Kits were time savers and were valuable resources.

Most high school teachers indicated that the Kits were better for younger age groups. As a result few high school teachers used kits.

One or two elementary teachers felt that accessability was a problem.

Several teachers felt that a brief teacher reaction to kits could have helped the next teacher plan the use of a kit.

Junior high students need "hands on" activities.

Field Trips

Arrangements by coordinators for places and the people to visit were most helpful.

Elementary and junior high teachers thought that field trips were real important phases of the project.

A few high school teachers felt that field trips were helpful but most high school teachers did not use them.

Field Trips - continued

Cancellation of schedules caused some dissatisfaction. Availability of transportation by station wagon was generally liked.

Two or three teachers would have preferred to take the whole class on field trips.

Some primary grade teachers felt that children were too young for field trips.

Role Models

Most teachers felt that the use of role models was very helpful.

A few teachers suggested parents as role models.

Few role models were used by high school teachers.

Intermediate grade teachers indicated that role models were most helpful.

More role models were used in elementary schools during the first two years of the project.

Most junior high teachers indicated that the use of role models met a need.

Miscellaneous Comments

The Central Office Career Education Staff was very supportive to teachers.

The personal encouragement by Central Office Career Staff was appreciated.

Arrangements by Central Office Project Staff for teacher community contacts were helpful.

Teachers appreciated the fact that someone was willing to listen to them with interest and concentration.

Good planning was mentioned by several teachers as being helpful.

The matter of making funds available for field trips and materials brought ideas to students who might otherwise not have had such experience. Examples: a trip to a college, a trip to Flint, and the use of a computer.

Most of the teachers felt that consultant help was available upon their request.

As Project Organizer starting a new career education project teachers would:

Begin planning several months before the project is scheduled to start.

Clarify and emphasize the concepts of career education.

Develop well planned workshops with clearly identified objectives.

Try to involve the whole school.

Be more agressive in promotion of career education.

As new teachers starting over with career education classes teachers would:

Provide clear directions from the beginning of the class.

Develop more organization for the project.

Work for more coordination with parents in career education.

Use concepts of career education in all classes.

Identify ways to use basic skills in many places.

Plan more field trips.

Develop a profile of individual student interests.

Infiltrate career education into more subjects.

Provide more teacher time for planning.

Request more money for materials.

Arrange for a career education center in the classroom.

Begin planning at least three weeks before school begins in fall.

Place more emphasis on self awareness on career education classes.

Provide materials at a lower reading level and be certain that the materials have racial balance.

Give more emphasis to role models.

More use of operation "shadow" (spending a day with an employee on the job).

Provide a more structured program but still allow teachers freedom to make classroom adaptations.

Tighten the supervision and testing of materials.

Spend more time on developing consensus on philosophy and processes of career educatio

Use teachers who had experience in career education.

Place more emphasis on awareness and self concepts.

More emphasis on how and why at the beginning.

Provide more opportunities for teacher dialogue.

Possibilities which may merit some consideration in planning

Many career project teachers will feel more comfortable if they can have some assurance about a career education program for next year.

A plan for some appropriate way to recognize the contribution of all teachers, administrators and coordinators who have been involved in the career education project seems appropriate.

Procedures should be developed to avoid scheduling only low achievers in career education classes.

The proposed high school departmental meetings to help all teachers within a department understand career education apparently did not materialize.

High school teachers in particular would have preferred higher budgets for the student materials.

Elementary teachers in particular indicated that some career education coordination and help from the central office for next year seems to be needed.

AHB:rs
5/6/75

SUMMARY OF PART II - Questionnaires

1. A review of the parts of the Muskegon Career Education Project program which teachers considered of the greatest value to students were field trips, films, role models, kits and materials.

   Many individual teachers identified specific experiences or items. In most instances another individual identified another item or experience as more important for that teacher.

2. The services provided by the Muskegon Career Education Central Office Project staff which were most helpful to teachers were related to field trips, materials, inservice activities and arranging for speakers.

   Implied but often not identified as such was the feeling of support, encouragement and readiness to help.

3. The services provided by the Muskegon Career Education Project Central Office Staff which were identified as least helpful to teachers were very few. Almost half of the teachers said there were no services that were not helpful.

   Individual teachers in some instances identified a service which was of least help but there was no consistent pattern.

4. The most helpful types of materials to teachers as identified by teachers provided by the Central Office of Muskegon Career Education Project Staff were money for materials, kits, instructional materials and books.

   Many specific individual items were identified by one or two teachers but there was no particular pattern grouping. Most of the items were types of materials or published pamphlets or books.

5. The types of materials provided by the Central Office of Muskegon Career Education Staff which teachers felt were least helpful were small in number. More than one-third of the teachers indicated that all of the materials were helpful.

   Some individual teachers identified some specific items as not helpful for the grade level taught by those teachers.

   Two teachers indicated some frustration caused by too much materials.

6. All teachers who returned the questionnaire recommended that the basic concepts of the Muskegon Career Education Project be used in other schools.

7. Priority suggestions for helping other teachers develop career education programs centered around inservice programs, time and assistance in developing lesson plans, clarification of career education and career education concepts.

   Many individual items were identified which were related to inservice activities which would provide teachers a functional understanding of career education, career education concepts and familiarity with materials before they began teaching.

   Some specific suggestion concerning the location and use of resources such as a career center were identified by one or two teachers.

   A need to involve parents and more teachers was mentioned by three or four teachers.

8. Priority suggestions for principals of schools in which career education courses may be introduced next year emphasized encouragement and support for teachers, availability and accessability of materials, use of local resources and more involvement in supportive activities.

   The importance of a functional understanding of career education by the principal was implied in several of the specific suggestions.

9. The identification of helpful avenues of communication with parents was not very comprehensive. Letters, field trips, phone calls, conferences and the use of parents as role models were mentioned but only by a few teachers.

   This seems to be the area where most teachers felt rather unsuccessful.

AHB:rs
5/9/75

TEACHER REACTIONS
MUSKEGON CAREER EDUCATION PROJECT

1. Please identify by a word or phrase each part of the Muskegon Career Education Project program which seemed to be of the greatest help or value to students.

2. Which services provided for the Muskegon Career Education Project Staff were most helpful to you?

3. Which services provided for the Muskegon Career Education Project Staff were least helpful to you?

4. Please identify the types of materials provided the Muskegon Career Education Project Staff which were the most helpful to you?

5. Please identify the types of materials provided the Muskegon Career Education Project Staff which were least helpful to you?

6. Would you recommend that the basic concepts of the Muskegon Career Education Project be used in other schools?

____________________ yes ____________________ no

7. If a career education program is to be used in other Muskegon or Muskegon Heights Schools next year what priority suggestions do you have for helping teachers in those schools develop readiness?

a. ____________________________________

b. ____________________________________

c. ____________________________________

d. ____________________________________

8. If the career education program is to be used in other Muskegon or Muskegon Heights Schools next year what priority suggestions do you have for the principals of those schools?

a. ____________________________________

b. ____________________________________

c. ____________________________________

d. ____________________________________

9. What avenues of communication with parents have been most helpful to you as a career education project teacher?

a. ____________________________________

b. ____________________________________

c. ____________________________________

d. ____________________________________

AHB:rs

Note: Please use the attached self-addressed envelope to mail the completed Questions and Answers to:

Dr. A. H. Blankenship
Educational Research Council of America
Rockefeller Bldg., 614 Superior Ave.
Cleveland, Ohio 44113

AN EVALUATION OF COMPREHENSIVE CAREER EDUCATION DEVELOPMENT IN THE MUSKEGON AND MUSKEGON HEIGHTS, MICHIGAN SCHOOL DISTRICTS

Department of Evaluation and Research
Educational Research Council of America
Rockefeller Building
Cleveland, Ohio 44113

Lawrence J. Marquit, Director

June, 1975

TABLE OF CONTENTS

Page

ACKNOWLEDGEMENTS 1

INTRODUCTION 2

Objectives and Hypotheses 4
Elementary School Objectives 4
Junior High School Objectives 7
Senior High School Objectives 11
Hypotheses 15

PROCEDURES

The Sample 19
The Instrument 23
Elementary Level 24
Junior High Level 27
Senior High Level 31
Validation of the ODI 40
Statistical Analysis Procedures 55
Limitations of the Investigation 56

FINDINGS

Hypothesis 1:

Elementary Level Findings 58
Junior High Level Findings 61
Senior High Level Findings 64

Hypothesis 2:

Elementary Level Findings 67
Junior High Level Findings 70
Senior High Level Findings 72

Hypothesis 3:

Elementary Level Findings 75
Junior High Level Findings 77
Senior High Level Findings 79

Hypothesis 4:

Elementary Level Findings 82
Junior High Level Findings 87
Senior High Level Findings 89

Page

FINDINGS (continued)

Hypothesis 5:
    Elementary Level Findings 96
    Junior High Level Findings 97
    Senior High Level Findings 100
Hypothesis 6:
    Elementary Level Findings 103
    Junior High Level Findings 105
    Senior High Level Findings 105
Hypothesis 7:
    Elementary Level Findings 109
    Junior High Level Findings 111
    Senior High Level Findings 111
Hypothesis 8 and 9:
    Elementary Level Findings 115
    Junior High Level Findings 116
    Senior High Level Findings 118
Hypothesis 10:
    Elementary Level Findings 120
    Junior High Level Findings 121
    Senior High Level Findings 123
Hypothesis 11:
    Junior High Level Findings 125
    Senior High Level Findings 128
Hypothesis 12: 131

SUMMARY 133

REFERENCES 138

APPENDIX 139

LIST OF TABLES

Page

1. Summary of CCEDP Objectives by Educational Level 18
2. Summary of Total Student Sample for the CCEDP 21
3. Summary of CCEDP Parent Sample 22
4. CCEDP Elementary Objectives Measured by the Occupational Development Inventory (ODI) 28
5. CCEDP Junior High Objectives Measured by the Occupational Development Inventory (ODI) 32
6. CCEDP Senior High Objectives Measured by the Occupational Development Inventory (ODI) 37
7. Estimated reliabilities and adjusted reliabilities for Occupational Development Inventory Elementary Level 44
8. Estimated reliabilities and adjusted reliabilities for Occupational Development Inventory Junior High Level 45
9. Estimated reliabilities and adjusted reliabilities for Occupational Development Inventory Senior High Level 46
10. Summary Statistics for Occupational Development Inventory, Elementary Level 48
11. Summary Statistics for Occupational Development Inventory, Junior High Level 49
12. Summary Statistics for Occupational Development Inventory, Senior High Level 50
13. Elementary Pretest Means on Parts I and III of the ODI (H_1) 59
14. Elementary Posttest Means on Parts I and III of the ODI (H_1) 60
15. Junior High Pretest Means on Parts III and IV of the ODI (H_1) 62
16. Junior High Posttest Means on Parts III and IV of the ODI (H1) 63
17. Senior High Pretest Means on Parts III and IV of the ODI (H_1) 65
18. Senior High Posttest Means on Parts III and IV of the ODI (H1) 66
19. Elementary Pretest Means on Parts I and III of the the ODI (H_2) 68
20. Elementary Posttest Means on Parts I and III of the ODI (H_2) 69
21. Junior High Pretest Means on Part I of the ODI (H_2) 70
22. Junior High Posttest Means on Part I of the ODI (H_2) 71

LIST OF TABLES (continued)

Page

23. Senior High Pretest Means on Part I of the ODI (H_2) 72
24. Senior High Posttest Means on Part I of the ODI (H_2) 73
25. Elementary Pretest Means on Part I of the ODI (H_3) 75
26. Elementary Posttest Means on Part I of the ODI (H_3) 76
27. Junior High Pretest Means on Part I of the ODI (H_3) 77
28. Junior High Posttest Means on Part I of the ODI (H_3) 78
29. Senior High Pretest Means on Parts I and III of the ODI (H_3) 79
30. Senior High Posttest Means on Parts I and III of the ODI (H_3) 80
31. Elementary Pretest Means on Part I of the ODI (H_4) 82
32. Elementary Pretest Proportions on Part III of the ODI (H_4) 84
33. Elementary Posttest Means on Part I of the ODI (H_4) 85
34. Elementary Posttest Proportions on Part III of the ODI (H_4) 86
35. Junior High Pretest Proportions on Part III of the ODI (H_4) 88
36. Junior High Pretest Means on Part IV of the ODI (H_4) 89
37. Junior High Posttest Proportions on Part III of the ODI (H_4) 90
38. Junior High Posttest Means on Part IV of the ODI (H_4) 91
39. Senior High Pretest Proportions on Part III of the ODI (H_4) 92
40. Senior High Pretest Means on Part IV of the ODI (H_4) 93
41. Senior High Posttest Proportions on Part III of the ODI (H_4) 94
42. Senior High Posttest Means on Part IV of the ODI (H_4) 95
43. Elementary Pretest Means on Part II of the ODI (H_5) 96
44. Elementary Posttest Means on Part II of the ODI (H_5) 97
45. Junior High Pretest Means on Part II of the ODI (H_5) 97
46. Junior High Posttest Means on Part II of the ODI (H_5) 99
47. Senior High Pretest Means on Part II of the ODI (H_5) 100
48. Senior High Posttest Means on Part III of the ODI (H_5) 101
49. Elementary Pretest Means of Part III of the ODI (H_6) 103
50. Elementary Posttest Means on Part III of the ODI (H_6) 104
51. Junior High Pretest Means on Part III of the ODI (H_6) 105
52. Junior High Posttest Means on Part III of the ODI (H_6) 106
53. Senior High Pretest Proportions on Part III of the ODI (H_6) . . . 107
54. Senior High Posttest Proportions on Part III of the ODI (H_6) . . . 107
55. Elementary Pretest Means on Part III of the ODI (H_7) 109
56. Elementary Posttest Means on Part III of the ODI (H_7) 110
57. Junior High Pretest Means on Part III of the ODI (H_7) 111

LIST OF TABLES (continued)

Page

58. Junior High Posttest Means on Part III of the ODI (H_7) 112
59. Senior High Pretest Means on Part III of the ODI (H_7) 113
60. Senior High Posttest Means on Part III of the ODI (H_7) 114
61. Junior High Pretest Means on Parts I and IV of the ODI (H_8,H_9) 115
62. Junior High Posttest Means on Parts I and IV of the ODI (H_8, H_9). 117
63. Senior High Pretest Means on Part IV of the ODI (H_8,H_9) 118
64. Senior High Posttest Means on Part IV of the ODI (H_8,H_9). 119
65. Elementary Pretest Means on Part I, Section 5 of the ODI (H_{10}) 120
66. Elementary Posttest Means on Part I, Section 5 of the ODI (H_{10}) 121
67. Junior High Pretest Means on Part I, Section 5 of the ODI (H_{10}) 121
68. Junior High Posttest Means on Part I, Section 5 of the ODI (H_{10}) 122
69. Senior High Pretest Means on Part I, Section 4 of the ODI (H_{10}) 123
70. Senior High Posttest Means on Part I, Section 4 of the ODI (H_{10}) 124
71. Junior High Pretest Means on Part III, Section 3b of the ODI (H_{11}). 125
72. Junior High Pretest Proportions on Part III of the ODI (H_{11}) 126
73. Junior High Posttest Means on Part III of the ODI (H_{11}) 127
74. Junior High Posttest Proportions on Part III of the ODI (H_{11}) 128
75. Senior High Pretest Proportions on Part III of the ODI (H_{11}) 129
76. Senior High Posttest Proportions on Part III of the ODI (H_{11}) 129

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INTRODUCTION

This section of the report describes the product evaluation portion of the Comprehensive Career Education Development Project (CCEDP). This evaluation was conducted by the Department of Evaluation and Research of the Educational Research Council of America (ERCA). The ERCA is a private, not-for-profit research and development organization and is chartered by the State of Ohio. The Department of Evaluation and Research was selected by the staff of the CCEDP to serve as the third-party evaluator for the Project. In its role as third-party evaluator, the Department was responsible for developing a research design to evaluate the results of the CCEDP, and to conduct that evaluation.

The CCEDP was funded by a grant from the U.S. Office of Education for the school years 1972-1973 through 1974-1975. Its goal was to incorporate career education into the K-12 instructional program. Advocates of career education maintain that the concepts of traditional vocational education are too limited for meeting the needs of today's children. Career education, according to these advocates, should strive to provide learning experiences that are more human and relevant so that children are more adequately prepared to enter America's work force. Career education is designed to complement, rather than compete with, education in the traditional academic areas.

At the elementary school level, the CCEDP program attempted to capitalize on the natural curiousity of children in the adult occupational world and to familiarize them with various occupations. Exposure to the world of work continued in the junior high school. Greater emphasis was placed on the relationship between school learning and the world of work, and on relationships between students' interests and abilities and their tentative career choices. In senior high, the program focused on career decision-making and the preparation required for fulfilling occupational interests.

Significant portions of the CCEDP program were based on McElroy's Ten-Cluster Classification of occupations (1972). His system, described below, is based mainly on work traits:

Building Construction and Maintenance - All occupations involving the physical construction of buildings or structures and their care, including fixtures.

Business and Commerce - All occupations involving contact with the public in promoting sales, distributing goods or services, keeping accounts, and making reports.

Communications - All occupations involving the "transmission of ideas and information," including the written, spoken, or graphic presentation of ideas and information.

Extractive Industries - All occupations involving the production and/or conversion of natural resources found in the earth or produced therefrom.

Health and Personal Services - All occupations involving the care and improvement of personal appearance, health, nutrition, and concern for the general well-being of people or animals.

Marine Industry - All occupations involving the construction, operation, and maintenance of ships and boats of all sizes.

Mechanics and Metal Working - All occupations involving the mechanical service and repair, machining, fabrication and finishing processes in manufacturing, foundry, forging, and molding operations, and plastics production and fabrication. The common thread that ties these occupations together is the use of metals and plastics of all kinds, sizes, types, alloys, and finishes, and the hand and power tools used.

Protective Services - All occupations involving the protection of people and property.

Special Technologies - All occupations involving the specialized use of such learnings as applied science, mathematics, design, mechanics, and instrumentation.

Textiles and Leather - All occupations involving the design, production, and care of articles made from various fabrics, fur, leather, and findings.

Objectives and Hypotheses

The major question that guided the present research was "to what extent did the students who participated in the CCEDP achieve the objectives of the program?"

The objectives served two functions. First, as a list of expected learning outcomes, the objectives gave direction to the instructional staff for preparing instructional materials and learning activities. Second, they served as a base for hypotheses development and testing.

Elementary School Objectives

The objectives for the elementary portion of the CCEDP were:

1. Students will know the personal and social values and importance of occupations within each cluster.

   A) Students will identify some personal needs which are met through work; e.g., material needs, need for creativity.

   B) Students will identify the value of work in terms of societal goals; e.g., understand that work is necessary to produce and distribute goods and services people want.

   C) Students will evaluate work according to its contribution to society; e.g., recognize the value of mental and manual labor.

   D) Students will identify the effects of some different occupations on home life and life style; e.g., know that some salesmen spend a great deal of time away from home; know that one's earnings influence the types of material goods he can own, kinds of leisure activities he can enjoy, and kinds of people he will associate with.

2. Students will know about some of the common characteristics of occupations within the major occupational groupings of each cluster.

   A) Students will identify the common thread of occupations within the major occupational groupings of each cluster; e.g., know that the Building Construction and Maintenance Cluster includes occupations dealing with the physical construction and care of buildings.

   B) Students will recognize general differences in educational backgrounds associated with some jobs; e.g., know that a medical doctor must have graduate training, or that a certificated teacher must have at least college training.

   C) Studsnts will identify some important factors that affect job success and satisfaction, e.g., effective work habits, and getting along with others.

3. Students will know some typical occupations within the community.

   A) Students will identify some of the kinds of occupations available in the community.

4. Students will recognize their own tentative strengths, weaknesses, and interests.

   A) Students will identify some of their strengths and weaknesses in school subjects.

   B) Students will state their tentative interest in working with people, data, and things.

   C) Students will identify school subjects that they like and dislike, recognizing that these may change.

   D) Students will identify their favorite leisure time activities, recognizing that these may change.

   E) Students will discriminate among their preferences for physical or mental activities, recognizing that these may change; e.g., know if they prefer playing baseball to playing chess.

   F) Students will state their preference for indoor versus outdoor activities, recognizing that this may change; e.g., know if they prefer playing indoors or outdoors.

5. Students will be able to relate some of their own strengths and interests to each cluster.

   A) Students will associate their abilities and limitations with possible success in one or more occupational clusters.

   B) Students will match their interests and values to characteristics of occupational clusters.

6. Students will increase the scope of their occupational vocabulary.

   A) Students will demonstrate knowledge of commonly used terms relating to work such as "employer"and "employee."

7. Students will view themselves positively as potentially valuable and productive members of society.

A) Students will express confidence in themselves as persons of worth and as potentially productive workers.

B) Students will demonstrate that they believe they have control of significant aspects of their environment and their future.

8. Students will become aware of the importance of good interpersonal relationships in general and in job success.

    A) Students will demonstrate knowledge of the importance of sharing, helping, respecting, and being considerate.

    B) Students will demonstrate knowledge of the importance of team work and will recognize work well done.

9. Parents will be aware of opportunities for occupational education in the school.

    A) Parents will demonstrate awareness of the occupational education program in the elementary school.

Junior High School Objectives

The objectives for the junior high portion of the CCEDP were:

1. Students will know about the common characteristics of occupations within the major occupational groupings of each cluster.

    A) Students will identify the common thread of occupations within the major occupational groupings of each cluster; e.g., know that the Building Construction and Maintenance Cluster includes occupations dealing with the physical construction and care of buildings.

    B) Students will demonstrate knowledge of basic words related to each occupational cluster and of a general vocabulary used in the world of work; e.g., "health and personal services," "employer," and "employee."

C) Students will distinguish among the general educational levels required for jobs within occupational clusters; e.g., know that a specialized professional must have graduate training and that a skilled worker usually has training from a technical or vocational school or apprentice program.

D) Students will identify some important factors that affect job success and job satisfaction; e.g., performance, positive attitude, effective work habits, and getting along with others.

2. Students will relate their tentative interests, abilities, and limitations to occupational clusters.

A) Students will identify some of their strengths and weaknesses in school subjects.

B) Students will state their preferences for dealing with people, data, or things, recognizing that these may change.

C) Students will identify school subjects that they like and dislike, recognizing that these may change.

D) Students will identify their favorite leisure time activities, recognizing that these may change.

E) Students will discriminate among their preferences for physical or mental activities, recognizing that these may change; e.g., know if they like to work with their hands better than working with abstractions.

F) Students will state their preference for indoor versus outdoor activities, recognizing that this may change; e.g., know if they would prefer working in an office to working outdoors.

G) Students will identify some occupations in clusters which are congruent with their own abilities, limitations, and interests, recognizing that these may change; e.g., know which occupations would be most suitable for them on the basis of their abilities and interests.

3. Students will have a general understanding of the determinants of present and future employment opportunities, and of general trends in each cluster.

   A) Students will demonstrate knowledge of the principle of supply and demand in the labor force.

   B) Students will demonstrate knowledge of general employment trends.

   C) Students will demonstrate knowledge of social, technical, and geographical influence on the job market; e.g., know that technical advances can create new jobs and eliminate old ones; that social and political interests can increase or decrease the demand for certain labor forces; and that rural and urban areas offer different kinds of job opportunities.

4. Students will identify tentative career choices which are consistent with their aspirations.

   A) Students will identify job characteristics which are important to them; e.g., intrinsic interest, expected earnings, prestige, working hours, work environment, type of associates, opportunities to work with people, data, and processes, the opportunity to communicate ideas and the opportunity to help and serve other people.

   B) Students will demonstrate an understanding of the value of maintaining adaptability horizontally and vertically in both education and occupation.

5. Student will demonstrate an understanding of the educational avenues to their tentative career aspirations.

   A) Students will identify types of schools, training programs, and employment opportunities which are suited to their own goals, capabilities, and financial resources.

B) Students will identify and will be able to use sources of information; e.g., the Dictionary of Occupational Titles, college catalogues and government publications, to find out about occupations, required courses for certain occupations, length of training time, cost of preparing for an occupation, financial aid available, alternative methods of preparing for a career, the quality of training available, and placement assistance.

6. Students will perceive the relationship between school subjects and the world of work.

   A) Student will relate the educational process to securing training basic to most occupations; e.g., know that mechanical drawing skills are necessary for being a draftsman; and that typing skills are necessary for being a secretary

7. Students will perceive the importance of positive human relationships in the attainment of a satisfying, productive life.

   A) Students will demonstrate knowledge of the importance of sharing, helping, and being considerate to those they work with.

   B) Students will demonstrate knowledge of the postive effects of team work and of recognizing work well done.

8. Students will have positive attitudes toward work.

   A) Students will identify some personal needs which are met through work, e.g., material needs or need for creativity.

   B) Students will identify the value of work in terms of societal goals; e.g., understand that work is necessary to provide goods and services people want.

   C) Students will evaluate work according to its contribution to society; e.g., recognize the value of mental and manual labor.

D) Students will identify the effects of some different occupations on home life and life style ; e.g., know that some salesmen spend a great deal of time away from home; or that one's earnings influence the types of material goods he can own, kinds of leisure time activities he can enjoy, and kinds of people he will associate with.

9. Students will view themselves positively as potentially valuable and productive members of society.

   A) Students will express confidence in themselves as persons of worth and as potentially productive workers.

   B) Students will demonstrate that they believe they have control of significant aspects of their environment and their future.

10. Parents will be aware of opportunities for occupational education in the school.

   A) Parents will demonstrate awareness of the occupational education program in the junior high school.

Senior High School Objectives

The objectives for the senior high portion of the CCEDP were:

1. Students will know about the common characteristics of occupations within the major occupational groupings of each cluster.

   A) Students will identify the common thread of occupations within the major occupational groupings of each cluster; e.g., know that the Building Construction and Maintenance Cluster includes occupations dealing with the physical construction and care of buildings.

   B) Students will demonstrate knowledge of words related to occupational groupings within clusters and of a general vocabulary used in the world of work; e.g., "food services," "health care," "employer," and "employee.

C) Students will distinguish among the general educational levels required for jobs within occupational clusters; e.g., know that clerical work usually requires a high school education.

D) Students will identify some important factors that affect job success and job satisfaction; e.g., performance, positive attitude, effective work habits, and getting along with others.

2. Students will understand and view positively their own interests, abilities, and limitations and perceive themselves as potentially valuable and productive members of society.

A) Students will identify some of their strengths and weaknesses in school subjects.

B) Students will state their interests and recognize their abilities in dealing with people, data, or things.

C) Students will identify school subjects that they like or dislike.

D) Students will identify their favorite leisure time activities.

E) Students will discriminate among their preferences for physical or mental activities.

F) Students will state their preference for indoor versus outdoor activities.

G) Students will percieve as being of worth to themselves and to society those occupational preferences which are congruent with their interests, abilities, and limitations.

H) Students will demonstrate that they believe they have control of significant aspects of their environment and their future.

3. Students will understand the relationship between occupation and desired life styles.

A) Students will identify some of the influences one's occupation has on his material life style; e.g., one's leisure time activities, or the place one resides.

B) Students will identify some of the influences one's occupation has on his social and family life; e.g., influence on friends one makes or influence of working hours on one's family life.

4. Students will tentatively select an occupational grouping which correlates with their interests and abilities.

   A) Students will identify some occupations most likely to satisfy their interests and values; e.g., know which occupations allow one to serve others or know which occupations have high income potential or are prestigious.

   B) Students will identify alternative occupations that are consistent with their interests, values, and abilities.

5. Students will plan and pursue a course of study which will help them acquire the qualifications for entry into the occupational field which correlates with their own interests and abilities.

   A) Students will have selected school courses which are related to their occupational preferences.

   B) Students will identify the education and training required for entering certain occupations.

   C) Students will reappraise the academic or training programs in which they are currently enrolled to ensure that the vocational and/or academic requirements of their occupational preferences will be met; where discrepancies are found, the programs will be modified.

   D) Students will identify sources and extent of financial aid; e.g., part-time employment, cooperative work-study programs, apprenticeship training programs, parental assistance, personal savings or possible athletic and academic scholarships.

   E) Students will investigate schools, training programs, and employment opportunities suited to their own goals, capabilities, and financial resources; e.g., visit or correspond with schools and training institutions.

F) Students will identify and will be able to use sources of information; e.g., the Dictionary of Occupational Titles, college catalogues and government publications, to find out about occupations, required courses, length of training time, cost of preparation, financial aid available, alternative methods of preparing for careers, quality of training available, and placement assistance.

6. Students will have a general understanding of the determinants of present and future employment opportunities and of general trends in each cluster.

A) Students will demonstrate knowledge of the principal of supply and demand in the labor force.

B) Students will demonstrate knowledge of general employment trends.

C) Students will demonstrate knowledge of social, technical, and geographical influences on the job market; e.g., know that technical advances can create new jobs and eliminate old ones, that social and political interests can increase or decrease the demand for certain labor forces, or that rural and urban areas offer different kinds of job opportunities.

7. Students will understand the importance of positive human relationships in achieving a satisfying, productive life.

A) Students will demonstrate knowledge of the importance of positive human relationships in job success; e.g., understand the value of sharing, helping, and being considerate.

B) Students will demonstrate knowledge of the positive effects of team work and of recognizing work well done; e.g., know why team work helps them and others succeed in their jobs and projects; or why recognition of others' good work contributes to positive human relationships.

8. Students will understand the importance of work from the standpoint of human need, economic necessity, and social value.

A) Students will recognize the importance of work from the standpoint of economic necessity; e.g., make enough money to support one's own family.

B) Students will recognize the importance of work from the standpoint of human need; e.g., fulfill a need for personal gratification.

C) Students will recognize the social value of employment; e.g., provide goods and services for society.

9. Parents will be aware of opportunities for occupational education in the school.

A) Parents will demonstrate awareness of the occupational education program in the senior high school.

Note that in some instances the wording of an objective was the same or very similar at two or more successive grade levels. When this occured, greater sophistication in the attainment of the objective was expected from students in the higher grades. Table 1 summarizes the objectives of the CCEDP by grade level. The twelve objectives in this Table were used to develop the hypotheses to be tested.

The hypotheses were:

H_1: Students who participated in the CCEDP program will know significantly more about the worth and importance of occupations, as measured by the Occupational Development Inventory, than students who did not participate in the CCEDP program.

H_2: Students who participated in the CCEDP program will know significantly more about the common characteristics of occupations, as measured by the Occupational Development Inventory, than students who did not participate in the CCEDP program.

H_3: Students who participated in the CCEDP program will know significantly more about occupational opportunities, as measured by the Occupational Development Inventory, than students who did not participate in the CCEDP program.

H_4: Students who participated in the CCEDP program will be able to recognize significantly more clearly their own tentative strengths, weaknesses, and interests, as measured by the Occupational Development Inventory, than students who did not participate in the CCEDP program.

H_5: Students who participated in the CCEDP program will know significantly more occupational words and terms, as measured by the Occupational Development Inventory, than students who did not participate in the CCEDP program.

H_6: Students who participated in the CCEDP program will view themselves as significantly more potentially valuable and productive members of society, as measured by the Occupational Development Inventory, than students who did not participate in the CCEDP program.

H_7: Students who participated in the CCEDP program will be significantly more aware of the importance of good interpersonal relationships in general and in job success, as measured by the Occupational Development Inventory, than students who did not participate in the CCEDP program.

H_8: Secondary school students who participated in the CCEDP program will have significantly more knowledge about the educational avenues to career choices, as measured by the Occupational Development Inventory, than secondary school students who did not participate in the CCEDP program.

H_9: Secondary school students who participated in the CCEDP program will be significantly more aware of the relationships between school subjects and the world of work, as measured by the Occupational Development Inventory, than secondary school students who did not participate in the CCEDP program.

H_{10}: Students who participated in the CCEDP program will know significantly more about the effect of occupations on personal life style, as measured by the Occupational Development Inventory, than students who did not participate in the CCEDP program.

H_{11}: Secondary school students who participated in the CCEDP program will be significantly more aware of occupational decision-making factors, as measured by the Occupational Development Inventory, than secondary school students who did not participate in the CCEDP program.

H_{12}: The parents of students who participated in the CCEDP program will be significantly more aware of opportunities for occupational education in the schools, as measured by the Parent's Questionnaire for the CCEDP, than parents whose children did not participate in the CCEDP program.

Table 1 - - Summary of CCEDP Objectives by Educational Level

OBJECTIVE	Elementary (objective number)	Junior High (objective number)	Senior High (objective number)
1. Worth and importance of occupations	(1)	(8)	(8)
2. Common characteristics of occupations	(2)	(1)	(1)
3. Occupational opportunities	(3)	(3)	(6)
4. Relate tentative strengths, weaknesses, and interests to occupations	(4 & 5)	(2)	(2)
5. Occupational vocabulary	(6)	(1B)	(1B)
6. Positive self-concept	(7)	(9)	(2)
7. Human relationships	(8)	(7)	(7)
8. Educational avenues to career choices		(5)	(5)
9. Relationship between school subjects and work		(6)	(5)
10. Occupations and life styles	(1D)	(8D)	(3)
11. Occupational decision-making		(4)	(4)
12. Parent awareness of occupational education in schools	(9)	(10)	(9)

PROCEDURES

In this section the procedures used to gather and analyze the data in this study will be reviewed. The five major portions of this section include a description of the sample; the instrumentation, including its development, construction, administration, and scoring; the statistical analysis of the data collected; and the limitations of the study.

The Sample

The research design required the identification of a stratified, selected sample comprising one experimental group and two control groups. The experimental group comprised 207 students in Muskegon and Muskegon Heights "target schools." The target schools served children representing large proportions of the economically poor, disadvantaged, and minority group segments of the school community. These schools consisted of three K-6 elementary schools, two 7-9 junior high schools, and two 10-12 high schools. The schools were located in two separate, but contiguous, school districts, Muskegon and Muskegon Heights. Control group I consisted of 256 students in grades four, seven, and ten, from both inside and outside the Muskegon-Muskegon Heights target schools. This group included some students from other school systems as well. The students in control group I chosen from other school systems were selected to match as closely as possible the student population of the Muskegon-Muskegon Heights systems in terms of ethnic and socioeconomic variables. Control group II consisted of 257 Muskegon and Muskegon Heights target school students in grade six and in grades nine through twelve. Table 2 summarizes the student sample by school, grade level, and number of participants.

The parent sample consisted of the parents of the 147 students who participated in the elementary and junior high level experimental group and the 132 elementary and high school sutdents in the control II group. Table 3 summarizes the parent sample.

The scheme for the overall research design is outlined below:

Experimental Group (Muskegon and Muskegon Heights Target Schools)

April-May, 1973:	collect pretest data in grades four, seven, and ten.
Spring, 1975:	collect posttest data from same students (grades six, nine, and twelve).

Control I Group (Non-target Schools)

April-May, 1973:	collect pretest data in grades four, seven, and ten.
Spring, 1975:	collect posttest data from same students (grades six, nine, and twelve).

Control II Group

April - May, 1973:	collect baseline data in grades six, nine, and twelve.

The research design allowed the evaluators to analyze the effect of the CCEDP program on student achievement while controlling for gains not

Table 2 - - Summary of Total Student Sample for the CCEDP

Group	School	Grade Level	N
Experimental	Lindbergh	4 and 5	21
	Angell	4	24
	Phillips	4	27
	Steele Junior High School	7	38
	Muskegon Hts. Junior High	7	37
	Muskegon High School	10	40
	Muskegon Hts. Senior High		15
Total, Experimental			202
Control I	Federal[a]	4	26
	Froebel	4	50
	Nelson Junior High School	7	95
	Benton Harbor High School[b]	10	85
Subtotal, Control I			256
Control II	Angell	6	20
	Lindbergh	6	25
	Steel Junior High School	9	48
	Muskegon Hts. High School	9,10,11,12	122
	Muskegon High School	12	42
Subtotal, Control II			257
Total, Control			513

[a] Holland, Michigan

[b] Benton Harbor, Michigan

Table 3 - - Summary of CCEDP Parent Sample

Group	Level	N
Experimental	Elementary	72
	Junior High	75
	Senior High	55
Total		202
Control II	Elementary	45
	Junior High	87
	Senior High	125
Total		257

directly attributable to the CCEDP program. The Control II Group provided baseline data.

The Instrument

The Occupational Development Inventory (ODI) was constructed to measure student achievement in four major areas: occupational knowledge, occupational vocabulary, occupational planning, and occupational interests, attitudes, and values.

McElroy's Ten-Cluster Classification of Occupations (McElroy, 1972) was used as a frame of reference to categorize occupations that have at lease one major common characteristic.[1]

The ODI was organized into three levels corresponding to the CCEDP elementary, junior high, and senior high objectives. A set of items was written for each objective at each level. In some cases only one item was written to assess a given objective. In other cases an entire section of the ODI was devoted to an objective; e.g., the vocabulary tests. To facilitate ODI administration to children with low ability in the language arts, reading and writing was kept to a minimum. The interview technique was used, format of the items required as little reading and writing as possible, and all items on the elementary level of the ODI were to be read to the students. Teachers were advised to read the items to seoondary level students if it was considered necessary. Each grade level of the ODI was color coded for ease in identification. The elementary parts were pink; junior high, yellow; and senior high, green.

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[1] Supra., pg. 4

Elementary Level

The elementary level of the ODI comprised three parts: Occupational Knowledge, Occupational Vocabulary, and Occupational Interest, Attitude, and Value.

Part I: Occupational Knowledge

This part was designed as a structured interview and attempted to measure portions of objectives 1,2,3, and 4 at the elementary level as enumerated in the Objective column of Table 1[2]. The following student knowledges and skills were to be assessed:

1) Knowledge of personal and societal reasons for working.
2) Ability to classify some occupations in each cluster of McElroy's Ten-Cluster Classification of Occupations according to the common thread within each cluster.
3) Ability to make tentative occupational choices commensurate with perceived interests and abilities.
4) Knowledge of the educational backgrounds required for some occupations.
5) Knowledge of the effects of some occupations on life style.
6) Knowledge of occupational opportunities within the community.

A copy of the Part I: Occupational Knowledge Interview Guide is shown in Appendix A.

Administration and Scoring Procedure for Part I: Occupational Knowledge

This part of the ODI was administered to the seventy-two children in the experimental group as a pretest in Spring, 1973 and again as a posttest in Spring, 1975. A similar pre- and posttest administration was scheduled for the seventy-six elementary children in the control I group and forty-five elementary children in the control II group. The later group was exempt from the posttest.

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[2] _Supra_, pg. 16

A three day training program was provided for selected professional staff members of the CCEDP to insure proper administration and scoring of this part of the ODI. This training was designed and conducted by two members of the investigative team during early Spring, 1973. A refresher program was again provided prior to posttesting in Spring, 1975

A copy of the Record Sheet to accompany the interview is shown in Appendix B. Interview scoring was done by a group of five Raters who were specially trained for their task. A copy of the Scoring Procedures used in this part of the ODI is shown in Appendix C. To assist the Raters, each of them was given a copy of a guide booklet that listed all of the common occupations included in each cluster. A copy of this booklet is shown in Appendix D and a copy of the interview Score Sheet is shown in Appendix E.

Part II: Occupational Vocabulary

This part of the ODI was a fifteen-item vocabulary test designed to measure knowledge of commonly used terms relating to the world of of work. The procedure for selecting the terms was:

1) Terms were first arbitrarily chosen by the investigation team.

2) Subjective judgements of the grade level for each term were made independently by members of the Consultant staff.

3) Terms were further checked using information from Carroll's *Word Frequency Book* (1971)

4) Final determination was made by combining the data from 2) and 3) above, and consideration of terms to be used in the CCEDP program.

A copy of this part of the ODI is shown in Appendix F.

Administration and Scoring Procedures for Part II: Occupational Vocabulary

This part of the ODI was administered in Spring, 1973, and again as a posttest in Spring, 1975.to the same students that responded to Part I: Occupational Knowledge. The directions for administering the part is shown in Appendix G.

PART III: Occupational Interest Attitude, and Value

This part of the ODI was designed to measure:

1. Awareness of student's strengths and weaknesses as well as likes and dislikes for school subjects.
2. Preferences for various leisure time activities, such as physical and mental activities, indoor and outdoor activities, and working with people, data, and things.
3. Self-concepts and student's perceived abilities to control the environment and future.

4. Students' attitudes and values towards the world of work and their perceptions of the importance of work habits and the effects of interpersonal relations on job success.

A copy of this part of the Occupational Development Inventory is shown in Appendix H.

Administration and Scoring Procedures for Part III: Occupational Interest, Attitude, and Value

This part of the ODI was administered in Spring, 1973 and again as a posttest in Spring, 1975 to the same students that responded to Parts I and II.

This part of the ODI, as in Part I, required some responses that were scored either "correct," or "incorrect." Other portions of this part were open-ended; that is, no "correctness" was expected or predetermined. The directions for administering this part of the ODI are shown in Appendix I. A summary of the CCEDP elementary objectives measured by the ODI is shown in Table 4.

Junior High Level

The junior high level of the ODI comprises four parts: Occupational Knowledge, Occupational Vocabulary, Occupational Interest, Attitude and Value, and Occupational Planning.

Part I: Occupational Knowledge

This fifty-eight item part of the ODI was designed to measure five

Table 4 - - CCEDP Elementary Objectives Measured by the Occupational Development Inventory (ODI)

ODI	ITEMS	Objectives[a]
Part I: Occupational Knowledge		
1. Reasons for Working	entire Section 1	1A, 1B
2. Common Thread	entire Section 2	2A
3. Occupational Choice	entire Section 3	5A, 5B
4. Educational Background	entire Section 4	2B
5. Life Style	entire Section 5	1D
6. Occupational Opportunities	entire Section 6	3A
Part II: Occupational Vocabulary	1-15	6A
Part III: Occupational Interest, Attitude, and Value		
1. School Subject	Section 1: 1-8	4A
2. Interest	Section 2a: 1-8	4C
	Section 2b: 1-3	4D
	Section 2c: 1,2	4E
	3	4F
	4-6	4B
3. Attitude and Value	Section 3a: 1,2,4,5	7A
	3,6,7	7B
	Section 3b: 1-3	1C
	4,5	8B
	6,9	8A
	7,8	2C
Parent's Questionnaire for the CCEDP	1-10	9A

[illegible]hese objectives are keyed to correspond to the earlier section, "Elementary Objectives," *Supra.*, pgs. 4-7 major areas:

1. Ability to classify some occupations in each cluster of McElroy's Ten-Cluster classification of Occupations according to the common thread within each cluster.
2. Knowledge of the education and training required for some occupations.
3. Knowledge of the relationship between school subjects and some occupations.
4. Knowledge of selected determinants and trends of employment opportunities.
5. Knowledge of the effects of some occupations on life style.

Administration and Scoring Procedure for Part I: Occupational Knowledge

This part of the ODI was administered as a pretest in Spring, 1973 and again as a posttest in Spring, 1975. Participants in the junior high pretesting included seventy-five children in the experimental group, ninety-five in the control I group, and 87 in the control II group. The posttest participants included the same children who responded to the pretest with the exception of the control II group.

A copy of this part of the ODI and the directions for its administration are shown in Appendixes J and K, respectively.

Part II: Occupational Vocabulary

This fifteen-item part of the ODI was designed to measure knowledge of basic words and terms related to the occupational clusters and of a general vocabulary used commonly in the world of work. A copy of this part of the ODI and the directions for its administration are shown in Appendixes L and M, respectively.

The procedure used for selecting the contents of this part was the same as for the elementary level Part II: Occupational Vocabulary.

Part III: Occupational Interest, Attitude, and Value

This three part section of the ODI consisted of seventy-two items designed to measure four major variables:

1. Awareness of student's own strengths and weaknesses and their likes and dislikes of school subjects.
2. Student's preferences for various kinds of leisure-time activities; such as, physical and mental activities, indoor and outdoor activities, and working with people, data and things.
3. Student's self-concepts and perceptions of their ability to control their environment and future.
4. Student's views of the value of work; the importance of adaptability and mobility in education and occupation; the importance of interpersonal relations and work habits in attaining job success; and job characteristics which they hold as important.

Administration and Scoring Procedure for
Part III: Occupational Interest, Attitude, and Value

The administration for this part of the ODI was the same as for the junior high level Part I, described above. A copy of this part of the ODI and the directions for its administration are shown in Appendixes N and O, respectively.

Part IV: Occupational Planning

This section of the ODI is a five-part structured interview designed to measure five variables:

1. Knowledge of personal and societal reasons for working.
2. Perceptions of tentative occupational preferences.
3. Perceptions of personal interests, attitudes, and values.
4. Knowledge of occupational information sources.
5. Knowledge of educational backgrounds and training required for selected occupations.

A copy of this part of the ODI is shown in Appendix P.

Administration and Scoring Procedures for Part IV: Occupational Planning

The administration and scoring procedures for this part of the ODI was the same as for the elementary level, Part I: Occupational Knowledge. A copy of the Scoring Procedures for Part IV is shown in Appendix Q. Copies of the Record Sheet and Score Sheet are shown in Appendixes R and S, respectively.

A summary of the CCEDP junior high objectives as measured by the ODI is shown in Table 5.

Senior High Level

Like the junior high level, this level comprises four sections or parts: Occupational Knowledge, Occupational Vocabulary, Occupational Interest, Attitude, and Value, and Occupational Planning.

Part I: Occupational Knowledge

Table 5 - - CCEDP Junior High Objectives
Measured by the
Occupational Development Inventory

ODI	Items	Objectives[a]
Part I: Occupational Knowledge		
1. Common Thread	Section 1: 1-26	1A
2. Education and Training	Section 2: 27-36	1C
3. Relationship Between School Subjects and Work	Section 3: 37-44	6A
4. Determinants and Trends of Employment Opportunities	Section 4: 45,46,51	3B
	47,49,52	3C
	48,50	3A
5. Life Style	Section 5: 53-58	8D
Part II: Occupational Vocabulary	1-15	1B
Part III: Occupational Interest, Attitude, and Value		
1. School Subject	Section 1: 1-11	2A
2. Interest	Section 2a: 12-22	2C
	Section 2b: 23-25	2D
	Section 2c: 26,27	2E
	28	2F
	29-31	2B
3. Attitude and Value	Section 3a: 32,33,35,36	9A
	34,37,38	9B
	Section 3b: 39,43,44,50	4B
	40,48	1D
	41,45,46,49	8C
	42,51	7A
	47,52	7B
	Section 3c: 53-72	4A
Part IV: Occupational Planning		
1. Reasons for Working	Section 1	8A,8B
2. Tentative Occupational Preference (s)		2G
3. Interest, Ability, and Value	Sections 2,3	2G
4. Information Sources	Section 4	5B
5. Education Required for Occupational Preference	Section 5	5A
Parent's Questionnaire for the CCEDP	1-10	10A

[a] These objectives are keyed to correspond to the earlier section, "Junior High Objectives," _supra_., pgs. 7-11

Part I: Occupational Knowledge

This fifty item part of the ODI was designed to measure four variables:

1. Ability to classify some occupations in each cluster of the Ten-Cluster Classification of Occupations.
2. Knowledge of the extent of education or training required for selected occupations.
3. Knowledge of some determinants and trends of employment opportunities.
4. Knowledge of the effects of some occupations on life style.

A copy of this part of the ODI is shown in Appendix T.

Administration and Scoring Procedure for Part I: Occupational Knowledge

This part of the ODI was to be administered to fifty-five beginning eleventh grade children in the experimental group in early Fall, 1973. Eighty-five tenth graders from control group I were also tested. Posttesting was conducted for these same groups in Spring, 1975. Control group II consisted of 125 children in grades ten through twelve. Since responses from the control II group was for base-line data only, no posttesting was conducted.

A copy of the directions for administering this part of the ODI is shown in Appendix U.

Part II: Occupational Vocabulary

This twenty item part of the ODI was designed to measure a student's knowledge of words and terms related to the occupational groupings within clusters and of a general vocabulary used in the world of work. A copy of Part II: Occupational Vocabulary and the directions for its administration are shown in Appendixes V andW, respectively.

The procedure used for the selection of words and terms in this part was the same as for the elementary level, Part II: Occupational Vocabulary.

Part III: Occupational Interest, Attitude, and Value

This part of the ODI comprised eighty-three items designed to measure three variables:

1. Awareness of personal strengths and weaknesses, as well as likes and dislikes in school subjects.
2. Preferences for various leisure time activities; such as, physical and mental activities, indoor and outdoor activities, and working with people, data, and things.
3. Perceptions of attitudes and values towards the world work, consisting of:
    A. Ability to control the environment and future.
    B. Ability to deal with people, data, and things.
    C. Worth of occupational preferences.
    D. Importance of adaptability and mobility in education and occupation
    E. Importance of interpersonal relations and work habits in attaining job success.

F. Importance of job characteristics in occupational selection.

A copy of this part of the ODI is shown in Appendix X.

Administration and Scoring of Part III: Occupational Interest, Attitude, and Value

This section of the ODI was to be administered to the same groups as in Part I: Occupational Knowledge. A copy of the directions for the administration of this part is shown in Appendix Y.

Part IV: Occupational Planning

This part of the ODI consisted of six sections. As a structured interview it was designed to measure the following six variables:

1. Knowledge of financial, personal, and societal reasons for working.
2. Tentative occupational preferences.
3. Perceptions of personal interests, attitudes, and values.
4. Knowledge of occupational information sources, including the education or training required for selected occupations, the availability of financial aid, and the investigation necessary for obtaining such education or training.
5. Knowledge of the relationship between the current school program and occupational preference.
6. Ability to select alternative occupational preferences.

A copy of this part of the ODI Interview Guide is shown in Appendix Z.

Administration and Scoring Procedures for Part IV: Occupational Planning

This part of the ODI was to be administered and scored in a manner similar to that as described in the junior high Part IV: Occupational Planning. Copies of the Record Sheet and Scoring Procedures for this Part of the ODI are shown in Appendixes AA and AB, respectively.

A summary of the CCEDP senior high objectives as measured by the ODI is shown in Table 6.

Parents' Questionnaire

Two forms of a questionnaire were developed by the investigative team to determine parental awareness of the CCEDP, including its goals and their perceptions of its educational value. Administration and return of this instrument was to be done by mail. All parents of children participating in the CCEDP were to receive a copy of the instrument when the project begain in 1973 and again at the end in 1975. A copy of the 1973 questionnaire is shown in Appendix AC. The 1975 questionnaire is shown in Appendix AD.

Additional ODI Information

An information sheet gathering demographic data about CCEDP participants was completed for each student. Each sheet included the participants' name, sex, date of birth, school, grade, school district,

Table 6 - - CCEDP Senior High Objectives
Measured by the
Occupational Development Inventory (ODI)

ODI	Items	Objectives[a]
Part I: Occupational Knowledge		
1. Common Thread	Section 1: 1-26	1A
2. Education and Training	Section 2: 27-36	1C
3. Determinants and Trends of Employment Opportunities	Section 3: 37,38,39,40, 41,42,43,44	6A, 6B, 6C
4. Life Style	Section 4: 45-50	3A,3B
Part II: Occupational Vocabulary	1-20	1B
Part III: Occupational Interest, Attitude, and Value		
1. School Subject	Section 1: 1-11	2A
2. Interest	Section 2a: 12-22	2C
	Section 2b: 23-25	2D
	Section 2c: 26,27	2E
	28	2F
	29-31	2B
3. Attitude and Value	Section 3a: 32,35,42,43	
	45,46,49	2G
	33,36,39,40	
	41,44,47,48	2B
	34,37,38	2H
	Section 3B: 50,55	6B
	51,59	1D
	52,57	8C
	53,62	7A
	54,61	6
	56	8
	58,63	7B
	60	8B
	Section 3c: 64-83	4A
Part IV: Occupational Planning		
1. Reasons for Working	entire Section 1	8A,8B,8C
2. Occupational Preference		4A
3. Interest, Ability, and Value	Sections 2 & 3	
4. Job Information	entire Section 4	5B,5D,5E,5F
5. Current School Program	entire Section 5	5A,5C
6. Alternative Occupational Preferences	entire Section 6	4B
Parent's Questionnaire for the CCEDP	1-10	9A

[a]These objectives are keyed to correspond to the earlier section, "Senior High Objectives," Supra., pgs. 11-15

and whether they lived with parents or others. A copy of this Information Sheet is shown in Appendix AE.

Two additional points need clarification. First, many items on the ODI were "keyed" with a correct answer; e.g., the vocabulary portions. Second, certain items were written to have no specific correct response. Such items were included in several sections, such as the areas of attitudes, interests, and values, occupational planning, and parts of the elementary test on occupational knowledge. For the items on interest, the criterion was how sure students were of their likes and dislikes. Operationally, it was expected that a greater proportion of responses on the posttest would occur in the "Do Not Like" and "Like" categories and fewer responses in the "Not Sure" category than was true on the pretest for the experimental groups. For the items on self-esteem, control of the environment, and the importance of positive human relations and cooperation, it was expected that there would be a greater proportion of positive responses on the posttest than on the pretest for the experimental group. For the items on work values, it was expected that the experimental group would report a greater crystalization of values; i.e., on the posttest there would be a greater proportion of responses in the "Not Important" and "Very Important" categories and fewer responses in the "Somewhat Important" category for the experimental groups than on the pretest.

Two factors precluded the completion of these validation measures. First, teacher grades were not generally available, and second, acquiring the needed data from the cumulative folders was not feasible.

Reliability of the ODI Interview Sections[3]

The interview sections of the ODI contained many open-ended items of the free response type. In order to make meaningful decisions concerning student achievement of program objectives being assessed by these items, strategies for quantifying student responses to these items were developed. The scoring keys developed for each of the three levels is shown in Appendixes C,R, and AD.

With many psychometric instruments, particularly those that elicit responses from open-ended questions, the judgment of the scorer is a critical element. Examples of such instruments include essay tests, creativity tests and projective tests of personality (Anastasi, 1968, p.86, and Coffman, 1971, p.277). It has been noted that with these types of instruments there is as much a need for an estimate of scorer reliability as there is for more conventional reliability coefficients (Anastasi, 1968, p.86). Because many questions on the ODI interview forms leave much to the judgment of the scorer, a study was undertaken to assess the reliability of these scores on these items. The activities and procedures involved in the reliability study are discussed below

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[3] This section of the present report was prepared by William McCook, University of Connecticut.

Validation of the ODI

In developing the ODI particular care was taken to insure that the instrument had content validity. Items were first screened by the investigative team and revised accordingly. These revisions were then submitted to the consultant team for further examination and suggestions for improvement. Finally, the entire battery was field tested with inner-city children in the Cleveland area. Validation was needed particularly on items designed to measure students' self-concept of academic ability, interest in school subjects, occupational knowledge (elementary level), and occupational planning (junior and senior high levels). The criterion for self-concept of academic ability was todetermine how realistic the student responses were through correlation techniques.

To compute such correlations, end-of-year teacher grades were collected, where available, from student cumulative folders for each academic discipline. Teacher grades of students as listed in these folders were organized into four categories: 1) amount of achievement, 2) amount of ability for the subject, 3) degree of effort, and 4) estimate of attitude. In most cases only the first of these was available. Teacher grades in each category were based on a five-point rating scale. The correlation of student item scores with teacher estimates of amount of achievement would represent indices of the concurrent validities of the interest items.

Although the procedures and rationale for gathering judgmental data on the student interview sections of the ODI were presented earlier, this topic will be reviewed briefly. Five judges or raters were recruited to participate in the study. All judges were from the Muskegon - Muskegon Heights vicinity. Each had been active in public school work for a number of years. Further, while the judges were familiar with the Muskegon - Muskegon Heights schools and industries, none was teaching in CCEDP target schools at the time of the investigation. Thus, the familiar "halo effect" in the judges' ratings on the basis of their involvement with schools or children was minimized. In addition, at no time were the scorers/judges made aware of any student's name, sex, teacher, school, or school system. They were aware only of the grade level of the student and that he or she lived in the Muskegon - Muskegon Heights vicinity.

Before the rating of interviews began, the judges went through a short training course on the scoring procedures. Subsequently, each judge was asked to score interview records from twenty-six classrooms. These classrooms included six senior high, twelve junior high, and eight elementary school classrooms. Classrooms included both experimental and control groups. Following the completion of his ratings each judge was remunerated for scoring the interviews and for his time during the training session.

Reliability Procedures

Following scoring by the judges, data from the interview sections were coded, keypunched, and submitted to statistical analysis. Estimates of inter-scorer reliability for each rated item in each level of the interview sections of the ODI were generated from the pooled ratings of the five judges using an analysis of variance technique (Winer, 1962, pp. 124-132). The analysis employed a cycling type of computer program to generate the reliability estimates (Green, et. al., 1975). The program generates a reliability estimate of the pooled ratings and for combinations of subsets of judges. At present, the program cycles through all combinations of one less than the total number of judges in addition to the total set of judges. Investigators may find this useful if they need to determine if any one of the judges' ratings should be deleted because of systematic variation in that judge's training, experience, or frame of reference (Greene, 1970, p.26). The program also generates adjusted reliabilities, generally higher than the original reliabilities, which have empirically eliminated the effect of differences in judges' means. These reliability estimates should be utilized when the investigator is not willing to accept the assumption of mean homogeneity (Ebel, 1951). Winer (1962, p.128) refers to this procedure as adjusting for differences in frame of reference.

The results of generating reliability estimates for items scored by judges in the ODI interview sections are presented in Tables 7 through 9. Reliabilities and adjusted reliabilities are presented for each item, for each grade within a level, and for combined grades across each level. In addition, the sample sizes that were used to generate the reliabilities are presented. Means and standard deviations associated with each judge for each item, for each grade within a level, and for combined grades across each level are presented in Tables 10 through 12. It is important to note the variations in sample size across grade level. These variations are due to incomplete data sets for one or more judges for the item under analysis. For example, section 1 of the elementary level interview has 97 subjects for grade 4, but only 87 for section 3a. This is because of incomplete data from some of the judges on the section 3a variable.

Three procedures were also used for determining what was a complete data set for analysis. First, for the elementary level, if section 3 was not scored (items 3a, 3b, 3c) then any section 6 score was not used in estimating reliabilities. The reason for this was that if section 3 was not scored it was assumed that something went wrong with the interviewing of the child, either because the interviewer did not follow the standard procedure or because the child was not capable of attending to the interview. Further, in almost every case that section 3 was not scored the judge did not score section 6. To avoid

Table 7--Estimated reliabilities and adjusted reliabilities for Occupational Development Inventory Elementary Level

Part I - Occupational Knowledge

Item (section)	Grade level	N	Reliability	Adjusted Reliability
1	4	97	.462	.486
1	5	19	.276	.631
1	6	44	.576	.698
1	Total	150	.438	.484
3a	4	87	.921	.927
3a	5	15	.919	.927
3a	6	34	.923	.925
3a	Total	136	.779	.782
3b	4	75	.752	.811
3b	5	15	.595	.708
3b	6	25	.662	.715
3b	Total	115	.712	.778
3c	4	75	.828	.841
3c	5	15	.731	.736
3c	6	25	.838	.842
3c	Total	115	.817	.828
6	4	75	.954	.957
6	5	15	.960	.961
6	6	25	.935	.949
6	Total	115	.953	.957

Table 8--Estimated reliabilities and adjusted reliabilities for Occupational Development Inventory Junior High Level

Part IV - Occupational Planning

Item (section)	Grade level	N	Reliability	Adjusted Reliability
1a	7	149	.964	.966
1a	9	68	.950	.954
1a	Total	217	.960	.962
1b	7	149	.905	.919
1b	9	68	.837	.878
1b	Total	217	.891	.910
2	7	137	.922	.923
2	9	61	.858	.868
2	Total	198	.907	.910
3a	7	137	.725	.780
3a	9	61	.718	.749
3a	Total	198	.725	.771
3b	7	137	.794	.807
3b	9	61	.807	.825
3b	Total	198	.797	.812
3c	7	137	.871	.892
3c	9	61	.886	.895
3c	Total	198	.881	.896
4	7	132	.936	.942
4	9	61	.921	.924
4	Total	193	.932	.937
5	7	132	.867	.878
5	9	61	.809	.837
5	Total	193	.853	.872

Table 9--Estimated reliabilities and adjusted reliabilities for Occupational Development Inventory Senior High Level

Part IV - Occupational Planning

Item (section)	Grade level	N	Reliability	Adjusted Reliability
1a	11	88	.935	.950
1a	12	40	.963	.968
1a	Total	128	.947	.958
1b	11	88	.921	.937
1b	12	40	.937	.949
1b	Total	128	.928	.942
1c	11	88	.816	.864
1c	12	40	.831	.903
1c	Total	123	.828	.881
3a	11	78	.792	.815
3a	12	37	.760	.762
3a	Total	115	.776	.792
3b	11	78	.835	.871
3b	12	37	.771	.774
3b	Total	115	.834	.868
3c	11	78	.896	.901
3c	12	37	.871	.888
3c	Total	115	.908	.91[illegible]
4a	11	78	.959	.962
4a	12	37	.960	.962
4a	Total	115	.966	.968
4b	11	78	.568	.743
4b	12	37	.409	.631
4b	Total	115	.536	.720
4c	11	78	.965	.967
4c	12	37	.967	.972
4c	Total	115	.966	.969

Table 9 - Continued

Item (section)	Grade Level	N	Reliability	Adjusted Reliability
4d	11	78	.984	.984
4d	12	37	.945	.948
4d	Total	115	.975	.976
4e	11	78	.977	.978
4e	12	37	.938	.946
4e	Total	115	.967	.969
5a	11	78	.768	.847
5a	12	37	.911	.933
5a	Total	115	.837	.887
5b	11	78	.947	.951
5b	12	37	.866	.870
5b	Total	115	.928	.932
5c	11	78	.867	.909
5c	12	37	.900	.921
5c	Total	115	.883	.916
6	11	78	.773	.848
6	12	37	.649	.716
6	Total	115	.745	.818

Table 10--Summary Statistics for Occupational Development Invento
Elementary Level

Part I - Occupational Knowledge

Item (section)	Grade level	N	Judge 1		Judge 2		Judge 3		Judge
			Mean	s.d.	Mean	s.d.	Mean	s.d.	Mean
1	4	97	1.28	.535	1.56	.595	1.36	.524	1.51
1	5	19	1.16	.375	1.84	.375	1.00	.000	1.21
1	6	44	1.46	.504	1.96	.211	1.75	.781	1.23
1	Total	150	1.27	.501	1.59	.558	1.37	.512	1.65
3a	4	87	0.37	.485	0.54	.501	0.36	.482	0.48
3a	5	15	0.52	.516	0.53	.516	0.47	.516	0.73
3a	6	34	0.53	.507	0.68	.475	0.53	.507	0.62
3a	Total	136	0.52	.502	0.45	.514	0.43	.497	0.55
3b	4	75	1.17	.811	2.20	1.065	2.59	1.525	2.19
3b	5	15	1.20	.414	2.40	1.056	2.60	1.242	1.73
3b	6	25	1.32	.300	2.20	1.000	2.56	1.446	1.76
3b	Total	115	1.18	.779	2.21	1.047	2.59	1.468	2.01
3c	4	75	0.65	.707	1.16	.916	0.83	1.070	0.89
3c	5	15	0.60	.632	0.93	.961	1.20	1.265	0.67
3c	6	25	0.80	.646	1.28	1.062	1.04	1.172	1.00
3c	Total	115	0.68	.683	1.16	.951	0.92	1.117	0.89
6	4	75	2.27	1.329	2.40	1.295	2.31	1.294	1.99
6	5	15	2.27	1.162	2.40	.986	2.53	1.060	2.27
6	6	25	2.68	1.069	2.76	1.165	2.72	1.242	2.00
6	Total	115	2.35	1.257	2.47	1.231	2.42	1.256	2.04

Table 10--Summary Statistics for Occupational Development Inventory Elementary Level

Part I - Occupational Knowledge

N	Judge 1		Judge 2		Judge 3		Judge 4		Judge 5	
	Mean	s.d.	Mean	s.d.	Mean	s.d.	Mean	s.d.	Mean	s.d.
97	1.28	.535	1.56	.595	1.36	.524	1.51	.561	1.32	.569
19	1.16	.375	1.84	.375	1.00	.000	1.21	.419	1.47	.513
44	1.46	.504	1.96	.211	1.75	.781	1.23	.424	1.64	.486
150	1.27	.501	1.59	.558	1.37	.512	1.65	.518	1.39	.654
87	0.37	.485	0.54	.501	0.36	.482	0.48	.503	0.38	.511
15	0.52	.516	0.53	.516	0.47	.516	0.73	.458	0.47	.516
34	0.53	.507	0.68	.475	0.53	.507	0.62	.493	0.53	.507
136	0.52	.502	0.45	.514	0.43	.497	0.55	.499	0.41	.494
75	1.17	.811	2.20	1.065	2.59	1.525	2.19	1.302	2.01	1.438
15	1.20	.414	2.40	1.056	2.60	1.242	1.73	1.033	2.33	1.234
25	1.32	.900	2.20	1.000	2.56	1.446	1.76	1.091	2.04	1.457
115	1.18	.779	2.21	1.047	2.59	1.468	2.01	1.246	2.03	1.411
75	0.65	.707	1.16	.916	0.83	1.070	0.89	.981	0.68	1.002
15	0.60	.632	0.93	.961	1.20	1.265	0.67	.817	0.87	1.246
25	0.80	.646	1.28	1.062	1.04	1.172	1.00	.913	0.96	1.060
115	0.68	.683	1.16	.951	0.92	1.117	0.89	.944	0.77	1.046
75	2.27	1.329	2.40	1.295	2.31	1.294	1.99	1.484	2.35	1.300
15	2.27	1.162	2.40	.986	2.53	1.060	2.27	1.100	2.47	.990
25	2.68	1.069	2.76	1.165	2.72	1.242	2.00	1.384	2.64	1.287
115	2.35	1.257	2.47	1.231	2.42	1.256	2.04	1.398	2.41	1.256

Table 11--Summary Statistics for Occupational Development Inventor
Junior High Level

Part IV - Occupational Planning

Item (section)	Grade level	N	Judge 1		Judge 2		Judge 3		Judge 4
			Mean	s.d.	Mean	s.d.	Mean	s.d.	Mean
1a	7	149	2.19	.896	2.31	.944	2.11	.886	2.30
1a	9	68	2.29	.882	2.50	.906	2.19	.935	2.44
1a	Total	217	2.21	.891	2.37	.934	2.13	.900	2.35
1b	7	149	0.92	.904	1.02	.904	0.51	.785	0.91
1b	9	68	1.10	.775	1.31	.758	0.59	.717	1.15
1b	Total	217	0.98	.868	1.11	.870	0.54	.764	0.98
2	7	137	0.68	.469	0.80	.405	0.75	.438	0.72
2	9	61	0.71	.460	0.87	.340	0.87	.386	0.84
2	Total	198	0.69	.465	0.82	.387	0.78	.425	0.76
3a	7	137	1.27	.743	1.93	1.093	2.36	1.428	1.75
3a	9	61	1.31	.720	1.97	1.064	2.08	1.509	1.51
3a	Total	198	1.28	.734	1.94	1.081	2.27	1.455	1.67
3b	7	137	0.91	.775	1.50	1.030	1.31	1.348	1.39
3b	9	61	0.90	.790	1.56	1.057	1.57	1.372	1.28
3b	Total	198	0.90	.778	1.52	1.036	1.39	1.358	1.36
3c	7	137	0.88	.732	0.91	.706	0.44	.695	0.63
3c	9	61	1.18	.866	1.12	.915	0.85	.873	0.82
3c	Total	198	0.97	.786	0.97	.780	0.57	.776	0.69
4	7	132	1.39	.854	1.71	.852	1.52	.937	1.34
4	9	61	1.64	.876	1.85	.833	1.61	.881	1.57
4	Total	193	1.47	.866	1.76	.846	1.55	.918	1.42
5	7	132	0.64	.483	0.80	.399	0.64	.481	0.66
5	9	61	0.69	.467	0.92	.277	0.79	.413	0.77
5	Total	193	0.65	.477	0.84	.368	0.69	.464	0.69

able 11--Summary Statistics for Occupational Development Inventory
Junior High Level

Part IV - Occupational Planning

	Judge 1		Judge 2		Judge 3		Judge 4		Judge 5	
N	Mean	s.d.	Mean	s.d.	Mean	s.d.	Mean	s.d.	Mean	s.d.
149	2.19	.896	2.31	.944	2.11	.886	2.30	.875	2.17	.918
68	2.29	.882	2.50	.906	2.19	.935	2.44	.952	2.24	.900
217	2.21	.891	2.37	.934	2.13	.900	2.35	.900	2.19	.911
149	0.92	.904	1.02	.904	0.51	.785	0.91	.968	0.76	.793
68	1.10	.775	1.31	.758	0.59	.717	1.15	.778	0.84	.704
217	0.98	.868	1.11	.870	0.54	.764	0.98	.918	0.78	.766
137	0.68	.469	0.80	.405	0.75	.438	0.72	.449	0.74	.442
61	0.71	.460	0.87	.340	0.87	.386	0.84	.373	0.74	.443
198	0.69	.465	0.82	.387	0.78	.425	0.76	.430	0.74	.441
137	1.27	.743	1.93	1.093	2.36	1.428	1.75	.932	2.24	1.263
61	1.31	.720	1.97	1.064	2.08	1.509	1.51	.960	1.84	1.083
198	1.28	.734	1.94	1.081	2.27	1.455	1.67	.944	2.12	1.222
137	0.91	.775	1.50	1.030	1.31	1.348	1.39	.980	1.31	1.258
61	0.90	.790	1.56	1.057	1.57	1.372	1.28	.915	1.31	1.219
198	0.90	.778	1.52	1.036	1.39	1.358	1.36	.960	1.31	1.243
137	0.88	.732	0.91	.706	0.44	.695	0.63	.664	0.64	.685
61	1.18	.866	1.12	.915	0.85	.873	0.82	.764	0.87	.885
198	0.97	.786	0.97	.780	0.57	.776	0.69	.700	0.71	.757
132	1.39	.854	1.71	.852	1.52	.937	1.34	.948	1.62	.904
61	1.64	.876	1.85	.833	1.61	.881	1.57	.921	1.66	.892
193	1.47	.866	1.76	.846	1.55	.918	1.42	.943	1.63	.898
132	0.64	.483	0.80	.399	0.64	.481	0.66	.476	0.55	.500
61	0.69	.467	0.92	.277	0.79	.413	0.77	.424	0.57	.499
193	0.65	.477	0.84	.368	0.69	.464	0.69	.462	0.55	.498

Table 12 - - Summary Statistics for Occupational Development Invento
Senior High Level

Part IV - Occupational Planning

Item (section)	Grade level	N	Judge 1		Judge 2		Judge 3		Judg
			Mean	s.d	Mean	s.d.	Mean	s.d.	Mean
1a	11	88	1.53	.802	2.03	.718	1.75	.777	1.82
1a	12	40	1.40	.841	1.78	.947	1.45	.986	1.63
1a	Total	128	1.49	.831	1.95	.803	1.66	.855	1.76
1b	11	88	1.21	.809	1.50	.884	1.47	.883	0.97
1b	12	40	1.60	.982	1.75	.899	1.68	.944	1.20
1b	Total	128	1.34	.881	1.58	.893	1.53	.904	1.04
1c	11	88	0.98	.727	1.33	.784	0.55	.605	1.08
1c	12	40	1.40	.928	1.63	.838	0.55	.639	1.50
1c	Total	128	1.11	.816	1.42	.810	0.55	.613	1.21
3a	11	78	2.03	1.256	2.20	1.089	2.01	1.500	1.55
3a	12	37	2.24	1.116	2.41	1.235	2.43	1.625	2.00
3a	Total	115	2.09	1.202	2.26	1.137	2.15	1.547	1.67
3b	11	78	1.23	.930	1.61	.962	1.61	1.339	1.03
3b	12	37	1.57	.765	2.19	.908	2.38	1.320	1.51
3b	Total	115	1.33	.897	1.80	.979	1.83	1.382	1.18
3c	11	78	0.96	.803	1.13	.732	0.87	.767	0.84
3c	12	37	1.62	.982	1.73	.932	1.22	.947	1.27
3c	Total	115	1.17	.911	1.32	.845	0.98	.841	0.97
4a	11	78	1.43	.895	1.65	.885	1.43	.938	1.41
4a	12	37	2.14	1.134	2.46	1.070	2.22	1.182	2.11
4a	Total	115	1.62	1.017	1.88	1.014	1.64	1.049	1.62
4b	11	78	0.42	.522	0.78	.418	0.65	.480	1.47
4b	12	37	0.57	.502	0.92	.364	0.81	.397	1.51
4b	Total	115	0.46	.518	0.82	.412	0.69	.463	1.47

Table 12 - - Summary Statistics for Occupational Development Inventory
Senior High Level

Part IV - Occupational Planning

Grade evel	N	Judge 1		Judge 2		Judge 3		Judge 4		Judge 5	
		Mean	s.d	Mean	s.d.	Mean	s.d.	Mean	s.d.	Mean	s.d.
11	88	1.53	.802	2.03	.718	1.75	.777	1.82	.824	1.94	.733
12	40	1.40	.841	1.78	.947	1.45	.986	1.63	.897	1.60	.955
otal	128	1.49	.831	1.95	.803	1.66	.855	1.76	.849	1.84	.821
11	88	1.21	.809	1.50	.884	1.47	.883	0.97	.915	1.13	.992
12	40	1.60	.982	1.75	.899	1.68	.944	1.20	.939	1.45	.932
otal	128	1.34	.881	1.58	.893	1.53	.904	1.04	.926	1.23	.982
11	88	0.98	.727	1.33	.784	0.55	.605	1.08	.777	1.09	.705
12	40	1.40	.928	1.63	.838	0.55	.639	1.50	.877	1.33	.797
otal	128	1.11	.816	1.42	.810	0.55	.613	1.21	.829	1.16	.740
11	78	2.03	1.256	2.20	1.089	2.01	1.500	1.55	1.176	2.47	1.242
12	37	2.24	1.116	2.41	1.235	2.43	1.625	2.00	1.225	2.41	1.235
otal	115	2.09	1.202	2.26	1.137	2.15	1.547	1.67	1.210	2.44	1.230
11	78	1.23	.930	1.61	.962	1.61	1.339	1.03	.946	2.05	1.297
12	37	1.57	.765	2.19	.908	2.38	1.320	1.51	.901	2.16	1.041
otal	115	1.33	.897	1.80	.979	1.83	1.382	1.18	.955	2.07	1.217
11	78	0.96	.803	1.13	.732	0.87	.767	0.84	.812	0.94	.635
12	37	1.62	.982	1.73	.932	1.22	.947	1.27	.961	1.35	.988
otal	115	1.17	.911	1.32	.845	0.98	.841	0.97	.882	1.07	.784
11	78	1.43	.895	1.65	.885	1.43	.938	1.41	.863	1.60	.921
12	37	2.14	1.134	2.46	1.070	2.22	1.182	2.11	1.125	2.22	1.084
otal	115	1.62	1.017	1.88	1.014	1.64	1.049	1.62	1.017	1.76	1.007
11	78	0.42	.522	0.78	.418	0.65	.480	1.47	.981	0.58	.496
12	37	0.57	.502	0.92	.364	0.81	.397	1.51	.902	0.57	.502
otal	115	0.46	.518	0.82	.412	0.69	.463	1.47	.952	0.57	.497

Table 12 (continued) - - Summary Statistics for Occupational Development In
Senior High Level

Part I - Occupational Planning

Item (section)	Grade level	N	Judge 1 Mean	Judge 1 s.d.	Judge 2 Mean	Judge 2 s.d.	Judge 3 Mean	Judge 3 s.d	Judge 4 Mean	s
4c	11	78	1.10	.981	1.36	.902	1.20	.947	1.25	
4c	12	37	1.38	.953	1.73	.870	1.46	.989	1.65	
4c	Total	115	1.18	.962	1.47	.894	1.26	.951	1.36	
4d	11	78	0.42	.496	0.43	.498	0.43	.498	0.43	
4d	12	37	0.76	.435	0.76	.435	0.92	.434	0.92	
4d	Total	115	0.53	.502	0.54	.501	0.59	.501	0.59	
4e	11	78	0.84	.904	1.03	.888	0.95	.887	0.88	
4e	12	37	1.41	.956	1.68	.944	1.16	.867	1.46	
4e	Total	Total	1.01	.955	1.22	.957	1.00	.833	1.05	
5a	11	78	1.00	.645	2.12	1.441	0.99	.933	1.82	1
5a	12	37	1.60	1.189	2.41	1.404	1.49	1.170	2.03	1
5a	Total	Total	1.19	.897	2.21	1.430	1.15	1.037	1.89	1
5b	11	78	0.69	.827	0.74	.860	0.67	.833	0.56	
5b	12	37	0.73	.652	0.97	.866	0.78	.712	0.70	
5b	Total	Total	0.70	.772	0.82	.794	0.70	.794	0.61	
5c	11	78	1.60	1.166	2.86	1.814	1.65	1.375	2.37	1
5c	12	37	2.32	1.492	3.38	1.891	2.27	1.427	2.73	1
5c	Total	Total	1.90	1.307	3.03	1.847	1.85	1.416	2.49	1
6	11	78	0.69	.690	1.23	.682	0.65	.699	0.36	
6	12	37	0.78	.479	1.16	.554	0.68	.669	0.54	
6	Total	115	0.72	.629	1.21	.642	0.66	.687	0.42	

12 (continued) - - Summary Statistics for Occupational Development Inventory
Senior High Level

Part I - Occupational Planning

rade vel	N	Judge 1		Judge 2		Judge 3		Judge 4		Judge 5	
		Mean	s.d.	Mean	s.d.	Mean	s.d	Mean	s.d.	Mean	s.d.
11	78	1.10	.981	1.36	.902	1.20	.947	1.25	.975	1.14	.928
12	37	1.38	.953	1.73	.870	1.46	.989	1.65	.889	1.46	.987
otal	115	1.18	.962	1.47	.894	1.26	.951	1.36	.951	1.23	.941
11	78	0.42	.496	0.43	.498	0.43	.498	0.43	.498	0.39	.491
12	37	0.76	.435	0.76	.435	0.92	.434	0.92	.722	0.73	.450
Total	115	0.53	.502	0.54	.501	0.59	.501	0.59	.621	0.50	.502
11	78	0.84	.904	1.03	.888	0.95	.887	0.88	.858	0.96	.850
12	37	1.41	.956	1.68	.944	1.16	.867	1.46	.960	1.46	.900
Total	Total	1.01	.955	1.22	.957	1.00	.833	1.05	.930	1.11	.896
11	78	1.00	.645	2.12	1.441	0.99	.933	1.82	1.430	0.92	.964
12	37	1.60	1.189	2.41	1.404	1.49	1.170	2.03	1.364	1.57	1.237
Total	Total	1.19	.897	2.21	1.430	1.15	1.037	1.89	1.407	1.13	1.096
11	78	0.69	.827	0.74	.860	0.67	.833	0.56	.783	0.49	.660
12	37	0.73	.652	0.97	.866	0.78	.712	0.70	.845	0.70	.520
Total	Total	0.70	.772	0.82	.794	0.70	.794	0.61	.802	0.56	.624
11	78	1.60	1.166	2.86	1.814	1.65	1.375	2.37	1.810	1.41	1.243
12	37	2.32	1.492	3.38	1.891	2.27	1.427	2.73	1.836	2.27	1.347
Total	Total	1.90	1.307	3.03	1.847	1.85	1.416	2.49	1.818	1.69	1.334
11	78	0.69	.690	1.23	.682	0.65	.699	0.36	.558	0.97	.773
12	37	0.78	.479	1.16	.554	0.68	.669	0.54	.650	1.00	.624
Total	115	0.72	.629	1.21	.642	0.66	.687	0.42	.592	0.98	.725

possible confusion in scoring in future use of the instrument, the elementary scoring procedure was modified to read that "if there is no cluster listed (in section 3) or if several are listed but none designated as the chosen cluster, do not score section 3. If no occupational choice is listed or if several are listed but none designated, starred or circled, as the chosen occupation, then do not score the remainder of the interview including section 3."

Second, for the junior high level, if section 2 was scored zero and section 3 was not scored, it was interpreted to mean that no occupational choice was made. In this case sections 3.4, and section 6 were not scored because they related back to section 2. To simplify the scoring situation, the scoring of the junior high interview was modified to read that " if there is no occupation listed in section 2 or if several are listed but none are designated, starred or circled, as the chosen work, do not score this section nor the remainder of the interview.

Third, for the senior high level, the original scoring scheme was developed so that if, in section 3 (Interest, Ability, Value), the student did not list a chosen work then this section and section 4 (Job Information) would not be scored; but section 5 (Current School Program and Alternative Occupational Preferences) could be scored. The directions for scoring were revised so that if no occupation is listed for the student being interviewed then section 3 and the remainder of the interview is not scored. The rationale behind this change is quite simple. Questions in section 5 request the student to relate his current or expected school program to his chosen kind of work . The validity of scoring responses to items in this section is highly questionable. Section 6 requests the student to provide an alternative occupational preference or preferences. If there is no preference to begin with, logically, there can be no alternative.

Results and Discussion

An examination of the reliabilities presented in Tables 7 to 9 indicate moderate to high reliabilities for most items in the Interview sections of the ODI. At the elementary level section 1 appears to have produced the greatest inconsistency in the judges' scores. The question asks the student to provide reasons why people work. Student responses were scored in terms of how well each student mentioned how work satisfied personal needs and/or societal goals. The low reliability for these items reflect a wide variation in what individual judges consider as personal and societal needs. Perhaps greater definition of these terms would have produced a more consistent scoring scheme for this item.

The junior high results indicated a highly reliable scoring mechanism. Most of the item reliabilities for total and individual grades were in the

.90's and high .80's, with the lowest being .718 for grade 9 section 3a.

The senior high results also indicated a highly reliable scoring system. Again, many items have estimated reliabilities in the .90's and high .80's with only two out of 15 items (section 4b and section 6) that could be considered moderately low.

An examination of the means and standard deviations in Tables 10 through 12 gives some idea of how different grade levels performed on the selected items within a level. A detailed examination of differences across grade levels was not the purpose of this particular study; however, examination of the effect of mean differences across judges within a specific item is possible. Where large differences occured, the differences between estimated and adjusted reliabilities tended to be greater than when mean differences between judges were small. This observation is consistent with the previously discussed assumption of mean homogeneity.

Summary

This section presented the results of an investigation of the inter-rater reliability of scores generated from open-ended items on the interview sections of the ODI. Estimated inter-rater reliabilities were calculated and presented for each item within each grade level and for each item across grade levels. Means and standard deviations for each judge for each item within each grade level and for each item across grade levels were also presented.

It was concluded that the scoring system, in general, produced highly reliable scores for this kind of instrument. Although data on several items produced low or moderately high reliabilities, it was suggested that future development or research on the scoring scheme may result in higher reliabilities for these items. Finally, modifications in the present scoring scheme for the purpose of reducing ambiguities and eliminating inconsistencies were presented and discussed.

Statistical Analysis Procedures

Each student response to the ODI was key-punched on the required numbers of standard 80-column Hollerith cards. These cards were then analyzed by the UNIVAC 1108 computer, housed at the Chi Corporation, a private data-processing firm located in Cleveland, Ohio. Additional statistical analyses were performed with the use of a Western Union Exchange Data Terminal 33 connected to Chi Corporations' Honeywell time-sharing computer system. Special programs were developed for statistically analyzing the ODI. All work was performed by the staff of the investigative team.

The following statistical operations were performed:

1. Analysis of variance was used to determine significant differences between scores of control groups and experimental groups and within experimental groups.
2. Item analysis of all test items.

3. t-tests were conducted to determine significant differences between experimental group scores and control group scores.

4. Chi-square tests were conducted to determine significantly different proportions of responses between experimental and control groups.

5. Analysis of covariance was used to determine significant differences in posttest data when pretest data revealed significant differences according to the results of analyses of variance.

In testing the hypotheses, differences were considered significant only if $\alpha = .05$ or better.

Limitations of the Investigation

1. Although the ODI was based on authoritative judgments concerning career and occupational education, the investigation made no attempt to evaluate the quality of the CCEDP instructional program.
2. The research conducted herein was descriptive. Attempts to diagnose the cause(s) of certain results were minimized because, unless supported by the data, such diagnoses could be only speculative.
3. The conclustions formed were restricted to the sample. The results of this investigation are reported in the next section, Findings.
4. As in all behavioral research, it is important that "treatments" be considered as manipulative variables. With the exception of data gathering and instrumentation, the investigative team made no attempt to standardize or supervise implementation of the CCEDP instructional program. It was assumed that the professional staff

who accepted responsibility for implementing that program had the competence to do so and that they also accepted their responsibilities for maintaining equal and valid pedagogy; e.g., that the amounts and contents of instruction were the same for all children in the experimental groups within each grade level.

FINDINGS

This section of the report is organized according to findings relative to each hypothesis. Each hypothesis is presented in order, according to grade level and is followed by: 1) a review of the data collected, 2) a brief discussion of the data, and 3) a conclusion relative to the support of the hypothesis.

H_1: Students who participated in the CCEDP program will know significantly more about the worth and importance of occupations, as measured by the ODI, than students who did not participate in the CCEDP program.

Elementary Level Findings: H_1

The parts of the elementary level ODI that related to this hypothesis were section 1 of Part I: Occupational Knowledge, and items 1-3 of section 3b, Part III: Occupational Interest, Attitude, and Value.

The means for section 1 of Part I were computed according to judges' ratings of student responses concerning the reasons for working. The highest possible score was 2 and the lowest was 0. Means for section 3b of Part III were computed according to the number of correct responses. The highest possible score was 3 and lowest, 0. Table 13 shows the results of the pretest data.

Table 13 - - Elementary Pretest Means on Parts I and III of the ODI (H_1)

ODI Items	GROUP		t
	Control I (N=25)	Experimental (N=39)	
Part I, Sec. 1	1.344	1.477	1.389
	(N=26)	(N=44)	
Part III, Sec. 3b, 1-3	1.731	1.977	1.407

These data show that on the pretest the experimental group received slightly higher ratings by the judges on the Part I items and also scored slightly higher on the Part III items than the control I group. The results of the t-tests revealed no significant differences between the group means.

The posttest data revealed significant differences between the experimental group and the control I and control II groups. Table 14 shows that an analysis of variance comparing the three elementary experimental groups with the control I group produced an F-ratio of 3.232 on the Part I items and an F-ratio of 5.975 when compared with the control II group. Since both of these values were significant at the $\alpha = .05$ level or better, one-tailed t-tests were conducted to determine significant differences between means for the total experimental group and the control I and control II groups, respectively. The computed t's indicated that there were significant differences at $\alpha = .01$ level in each case.

Table 14 - - Elementary Posttest Means on Parts I and III of the ODI (H_1)

ODI ITEMS	GROUP						CO	
	CONTROL		EXPERIMENTAL				F	
	I (N=25)	II (N=44)	1 (N=14)	2 (N=17)	3 (N=8)	Total (N=39)	E/CI	E
Part I, Sec. 1	1.550	1.604	1.357	1.309	1.187	1.301	3.232*	5.
Part III, Sec.3b,1-3	(N=26) 1.654	(N=44) 2.455	(N=18) 1.500	(N=17) 1.882	(N=9) 1.667	(N=44) 1.682	.458	6.

* one-tailed test, α=.05
** one-tailed test, α=.01

- Elementary Posttest Means on Parts I and III of the ODI (H_1)

GROUP						COMPARISONS			
CONTROL		EXPERIMENTAL				F		*t*	
I (N=25)	II (N=44)	1 (N=14)	2 (N=17)	3 (N=8)	Total (N=39)	E/CI	E/CII	E_t/CI	E_t/CII
1.550	1.604	1.357	1.309	1.187	1.301	3.232^{*}	5.975^{**}	2.911^{**}	4.096^{**}
(N=26) 1.654	(N=44) 2.455	(N=18) 1.500	(N=17) 1.882	(N=9) 1.667	(N=44) 1.682	.458	6.599^{**}	..	4.253^{**}

* one-tailed test, $\alpha=.05$

* one-tailed test, $\alpha=.01$

Note that *t*-tests were conducted only when an analysis of variance revealed significant differences between experimental and control group scores. This procedure was used throughout the investigation.

Inspection of Table 14 shows that both control groups had means that were significantly higher than any experimental group. Analysis of variance on the Part III items show that none of the experimental group means was significantly higher than the control I mean; therefore no *t*-test was conducted between the total experimental group and control I group. However, the *t*-test indicated that the control II group mean of 2.455 was significantly higher than the experimental mean of 1.682.

Junior High Level Findings: H_1

The parts of the junior high level ODI findings related to this hypothesis were Section 3b, items 41,45,46, and 49, and Part IV, Section 1. The highest score possible on the Part III items was 4 and the lowest, 0. The highest score possible on the Part IV items was 2 and the lowest, 0. The pretest means for the experimental and control I groups are shown in Table 15. Note that there were no significant differences, even with the control I group scoring slightly higher.

The posttest data is shown in Table 16. Note that the control II group was rated significantly higher than the experimental group on the Part IV items. There were no significant differences on the Part III items.

Table 15 - - Junior High Pretest Means on Parts III and IV of the ODI (H_1)

ODI Items	GROUP		t
	Control I (N=62)	Experimental (N=25)	
Part III Sec.3b,41,45, 46,49	2.661	2.880	1.059
	(N=53)[a]	(N=25)	
Part IV Sec. 1	1.530	1.424	0.635

[a] This difference in N's is because of fewer responses to these items. Same holds for all other tables.

Table 16 - - Junior High Posttest Means on Parts III and IV of the ODI (H_1)

ODI ITEMS	GROUP					COMP	
	CONTROL		EXPERIMENTAL			F	
	I (N=64)	II (N=46)	1 (N=13)	2 (N=12)	Total (N=25)	E/CI	E/CII
Part III Sec. 3b,41 45,46,49	3.000	2.854	2.846	3.167	3.000	0.469	0.547
	(N=53)	(N=46)	(N=14)	(N=11)	(N=25)		
Part IV Sec. 1	1.519	1.633	1.121	1.307	1.214	2.858	4.698

*one-tailed test, α = .05
*one-tailed test, α = .01

16 - - Junior High Posttest Means on Parts III and IV of the ODI (H_1)

GROUP				COMPARISONS			
NTROL	EXPERIMENTAL			F		t	
II (N=46)	1 (N=13)	2 (N=12)	Total (N=25)	E/CI	E/CII	E_t/CI	E_t/CII
2.854	2.846	3.167	3.000	0.469	0.547	. .	. .
(N=46) 1.633	(N=14) 1.121	(N=11) 1.307	(N=25) 1.214	2.858	4.698*	. .	3.680**

d test, α =.05
d test, α =.01

Senior High Level Findings: H_1

The parts of the ODI that related to this hypothesis were Part III, section 3b, items 52, 56, 57, and 60 and Part IV, section 1. The highest possible was 4 and the lowest, 0. The highest possible interview judge rating on the Part IV item was 2 and the lowest, 0.

Table 17 shows the results of the senior high level pretest. There were no significant differences on the Part III items. Because of difficulties in Part IV administration, it was not possible to collect data from the control I group. Consequently, the computation of a t was not possible.

Posttest data shown on Table 18, revealed no significant differences on the Part III items. Because of difficulties in data collection, no means were computed for the control I group. A t-test between the total experimental and control II groups revealed no significant differences.

These data did not support the hypothesis that students who participated in the CCEDP program will know significantly more about the worth and importance of occupations, as measured by the ODI, than students who did not participate in the CCEDP program. Significant differences at the elementary and junior high levels suggested that the control groups, in fact, had significantly more knowledge about the worth and importance of occupations than the experimental groups.

Table 17 - - Senior High Pretest Means on Parts III and IV of the ODI (H_1)

ODI ITEMS	GROUP		$\underline{t}$
	Control I (N=50)	Experimental (N= 33)	
Part III, Sec. 3b: 52, 56,57,60	2.940	3.151	1.104
Part IV Sec. .1	N.A.[a]	(N=26) 1.143	..

[a] These data were not available.

Table 18 - - Senior High Posttest Means on Parts III and IV of the ODI (H

ODI ITEMS	GROUP						C	
	CONTROL		EXPERIMENTAL				F	
	I (N=50)	II (N=84)	1 (N=13)	2 (N=11)	3 (N=9)	Total (N=33)	E/CI	
Part III Sec.3b: 52,56, 57,60	3.200	3.381	3.231	3.000	3.222	3.151	0.208	
Part IV Sec.1	N.A.	(N=80) 1.486	(N=12) 1.208	(N=8) 1.646	(N=6) 1.347	(N=26) 1.375	..	

ble 18 - - Senior High Posttest Means on Parts III and IV of the ODI (H_1)

GROUP						COMPARISONS			
CONTROL		EXPERIMENTAL				F		t	
I (N=50)	II (N=84)	1 (N=13)	2 (N=11)	3 (N=9)	Total (N=33)	E/CI	E/CII	E_t/CI	E_t/CII
3.200	3.381	3.231	3.000	3.222	3.151	0.208	0.[illegible]33	..	..
N.A.	(N=80) 1.486	(N=12) 1.208	(N=8) 1.646	(N=6) 1.347	(N=26) 1.375	..	..	..	..

H_2: Students who participated in the CCEDP program will know significantly more about the common characteristics of occupations, as measured by the ODI, than students who did not participate in the CCEDP program.

Elementary Level Findings: H_2

The items on the elementary level of the ODI that attempted to measure this objective were Part I, sections 2 and 4, and Part III, section 3b, items 7-8. The highest score possible for Part I, section 2 was 23 and the lowest, 0. The highest possible score for Part I, section 4 was 6 and the lowest, 0. The highest possible score on the Part III items was 2, and the lowest, 0.

Table 19 shows the pretest results of the ODI on the portions described for the experimental and control groups. There were no significant differences.

The posttest data for these same ODI items revealed significant differences on the Part I, section 4 and Part III, section 3b items. In both cases the control II group had significantly higher means than the total experimental group. These data are shown in Table 20.

Table 19 - - Elementary Pretest Means on Parts I and III of the ODI (H_2)

ODI ITEMS	GROUP		t
	Control I (N=25)	Experimental (N=39)	
Part I			
Sec. 2: 1-23	13.840	15.564	1.663
Sec. 4: 24-29	3.800	4.077	0.750
Part III	(N=26)	(N=44)	
Sec. 3b: 7-8	0.808	1.068	1.515

Table 20 - - Elementary Posttest Means on Parts I and III of the ODI (H_2)

ODI ITEMS	GROUP						C
	CONTROL		EXPERIMENTAL				F
	I (N=25)	II (N=44)	1 (N=14)	2 (N=17)	3 (N=8)	Total (N=39)	E/CI
Part I Sec.2:1-23	16.000	17.568	17.857	18.000	17.500	17.846	1.771
Sec.4:24-29	4.120	4.773	3.714	4.471	4.375	4.179	1.213
Part III Sec.3b:7-8	0.731	1.409	0.722	1.177	1.000	0.955	1.654

- Elementary Posttest Means on Parts I and III of the ODI (H_2)

GROUP						COMPARISONS			
CONTROL		EXPERIMENTAL				F		t	
I (N=25)	II (N=44)	1 (N=14)	2 (N=17)	3 (N=8)	Total (N=39)	E/CI	E/CII	E_t/CI	E_t/CII
16.000	17.568	17.857	18.000	17.500	17.846	1.771	0.098	. .	. .
4.120	4.773	3.714	4.471	4.375	4.179	1.213	3.499*	. .	2.485*
0.731	1.409	0.722	1.177	1.000	0.955	1.654	4.382**	. .	3.031**

Junior High Level Findings: H_2

The parts of the junior high ODI that related to this hypothesis were on Part I, Sections 1 and 2. These thirty-six items were concerned with student knowledge of some common characteristics of occupations. The highest possible score on these items was 36 and the lowest, 0.

Table 21 shows the results of the analysis of data on the pretest. There was no significant difference between means for the control I and experimental groups.

Table 21 - - Junior High Pretest Means on Part I of the ODI (H_2)

ODI ITEMS	GROUP		t
	Control I (N=64)	Experimental (N=25)	
Part I Sec. 1 & 2 1-36	23.531	24.240	0.975

Posttest data revealed no significant differences between means for the experimental and either control group. These data are shown in Table 22.

Table 22 - - Junior High Posttest Means on Part I of the ODI

ODI ITEMS	GROUP					COM	
	CONTROL		EXPERIMENTAL			F	
	I (N=64)	II (N=46)	1 (N=13)	2 (N=12)	Total (N=25)	E/CI	E/CII
Part I Sec. 1 & 2 1-36	24.422	24.174	25.539	26.583	26.040	1.503	2.365

Table 22 - - Junior High Posttest Means on Part I of the ODI (H_2)

GROUP				COMPARISONS			
NTROL	EXPERIMENTAL			F		t	
II (N=46)	I (N=13)	2 (N=12)	Total (N=25)	E/CI	E/CII	E_t/CI	E_t/CII
24.174	25.539	26.583	26.040	1.503	2.365	. .	. .

Senior High Level Findings: H_2

The part of the ODI that related to this hypothesis was Part I, Sections 1 and 2. These thirty-six items were parallel to the junior high items relative to H_2. The highest possible score was 36 and the lowest, 0.

Table 23 shows the results of the pretest data. Note that there were no significant differences between means for the experimental and control I groups. The posttest data, shown in Table 24, revealed no significant differences.

Table 23 -- Senior High Pretest Means on Part I of the ODI (H_2)

ODI ITEMS	GROUP		t
	Control I (N=53)	Experimental (N=33)	
Part I Sec. 1 & 2 1-36	23.830	24.273	0.442

Table 24 - - Sen [illegible] Hi [illegible] ean on Part I [illegible]

ODI ITEMS	GROUP							
	CONTROL		EXPERIMENTAL					
	I (N=53)	II (N=92)	1 (N=13)	2 (N=11)	3 (N=9)	Total (N=33)	E/CI	E/
Part I Sec. 1 & 2 1-36	25.321	25.8[illegible]	26.615	25.182	25.111	25.727	0.457	0.

- - Sen. His [illegible] Part [illegible]

GROUP						COMPARISONS			
CONTROL		EXPERIMENTAL				F		t	
I =53)	II (N=92)	1 (N=13)	2 (N=11)	3 (N=9)	Total (N=33)	E/CI	E/CII	E_t/CI	E_t/CII
.321	25.8[illegible]	26.615	25.182	25.111	25.727	0.457	0.374	..	..

These data do not support the hypothesis that students who participated in the CCEDP program knew significantly more about the common characteristics occupations, as measured by the ODI, than did the students who did not participate in the CCEDP program.

Posttest data at the elementary level suggested that the control II group knew more about the occupational characteristics than the experimental group.

H_3: Students who participated in the CCEDP program will know significantly more about occupational opportunities, as measured by the ODI, than students who did not participate in the CCEDP program.

Elementary Level Findings: H_3

The part of the ODI that related to this hypothesis was Part I, section 6. The highest possible judges' rating on this interview section was determined by the maximum number of local businesses and industries that the respondent could identify. Table 25 shows that on the pretest interview the mean number of businesses and industries that could be named by control I group respondents was about 2. The experimental group mean was about the same, with no significant difference.

Table 25 -- Elementary Pretest Means on Part I of the ODI (H_3)

ODI ITEMS	GROUP		*t*
	Control I (N=25)	Experimental (N=39)	
Part I Sec. 6	2.328	1.949	1.174

Table 26 -- Elementary Posttest Means on Part I of the ODI (H_3)

ODI ITEMS	GROUP						CO	
	CONTROL		EXPERIMENTAL				F	
	I (N=25)	II (N=44)	1 (N=14)	2 (N=17)	3 (N=8)	Total (N=39)	E/CI	E/
Part I Sec. 6	1.280	2.005	1.500	1.397	1.344	1.423	0.178	2.

ble 26 -- Elementary Posttest Means on Part I of the ODI (H_3)

GROUP						COMPARISONS			
CONTROL		EXPERIMENTAL				F		$\underline{t}$	
I =25)	II (N=44)	1 (N=14)	2 (N=17)	3 (N=8)	Total (N=39)	E/CI	E/CII	E_t/CI	E_t/CII
280	2.005	1.500	1.397	1.344	1.423	0.178	2.314	. .	. .

Table 26 shows that there were no significant differences between the experimental groups and either control group. Curiously, the control II group scored slightly higher than the experimental group.

Junior High Level Findings: H_3

The ODI items that related to this hypothesis were all in Part IV, section 4. The highest possible score for this objective section was 8 and the lowest, 0. Table 27 shows that the mean score for the control I group on the pretest was not significantly different from the experimental group mean.

Table 27 -- Junior High Pretest Means on Part I of the ODI (H_3)

ODI ITEMS	GROUP		t
	Control I (N=64)	Experimental (N=25)	
Part I Sec. 4	6.016	5.760	0.738

Table 28 shows that neither control group had a posttest mean significantly different from the experimental group.

Table 28 -- Junior High Posttest Means on Part I of the ODI (H_3)

ODI ITEMS	GROUP					COMPA	
	CONTROL		EXPERIMENTAL			F	
	I (N=64)	II (N=46)	1 (N=13)	2 (N=12)	Total (N=25)	E/CI	E/CII
Part I Sec. 4	6.406	6.652	6.461	7.083	6.760	1.734	0.879

e 28 -- Junior High Posttest Means on Part I of the ODI (H_3)

GROUP				COMPARISONS			
TROL	EXPERIMENTAL			F		t	
II (N=46)	1 (N=13)	2 (N=12)	Total (N=25)	E/CI	E/CII	E_t/CI	E_t/CII
6.652	6.461	7.083	6.760	1.734	0.879	..	..

Senior High Level Findings: H_3

The portions of the ODI that related to this hypothesis were Part I, section 3, items 37-44 and Part III, section 3b, items 50, 54, 55, and 61. The highest possible score on the Part I section was 8 and the lowest, 0. The highest possible score on the Part III section was 4 and the lowest, 0.

The pretest data presented in Table 29 show that the mean control score was significantly different from the experimental group's at the .01 level. There was no significant difference between means on the Part III items.

Table 29 -- Senior High Pretest Means on Parts I and III of the ODI (H_3)

ODI ITEMS	GROUP		t
	Control I (N=53)	Experimental (N=33)	
Part I Sec. 3	5.660	6.333	2.506*
Part III Sec. 3b: 50,54,55,61	2.860	3.121	1.222

An analysis of covariance on the Part I items and an analysis of variance on the Part III items on the posttest data revealed no significant differences in means between the experimental and control groups. Table 30 shows these data.

Table 30 -- Senior High Posttest Means on Parts I and III of the ODI (H_3)

ODI ITEMS	GROUP						CO	
	CONTROL		EXPERIMENTAL				F	
	I (N=53)	II (N=92)	1 (N=13)	2 (N=11)	3 (N=9)	Total (N=33)	E/CI	E
Part I Sec. 3	6.491	6.435	6.692	6.182	6.444	6.455	1.327	0
	(N=50)	(N=84)	(N=13)	(N=11)	(N=9)	(N=33)		
Part III Sec. 3b: 50,54,55, 61	3.300	3.250	3.231	3.455	3.333	3.333	0.203	0

e 30 -- Senior High Posttest Means on Parts I and III of the ODI (H_3)

GROUP						COMPARISONS			
CONTROL		EXPERIMENTAL				F		*t*	
I (N=53)	II (N=92)	1 (N=13)	2 (N=11)	3 (N=9)	Total (N=33)	E/CI	E/CII	E_t/CI	E_t/CII
6.491	6.435	6.692	6.182	6.444	6.455	1.327	0.301	. .	. .
(N=50) 3.300	(N=84) 3.250	(N=13) 3.231	(N=11) 3.455	(N=9) 3.333	(N=33) 3.333	0.203	0.297	. .	. .

The data presented for the elementary, junior, and senior high levels do not support the hypothesis that students who participated in the CCEDP know significantly more about occupational opportunities, as measured by the ODI, than students who did not participate in the program.

H_4: Students who participated in the CCEDP program will recognize significantly more clearly their own tentative strengths, weaknesses, and interests, as measured by the ODI, than students who did not participate in the CCEDP.

Elementary Level Findings: H_4

The items analyzed on the ODI that related to this hypothesis were Part I, sections 3a, 3b, and 3c and Part III, sections 1, 2a, and 2c. The Part I sections attempted to measure clarity of occupational interests. The highest scores possible for the Part I items were 1, 4, and 3, respectively, for sections 3a, 3b, and 3c. The lowest possible scores on these sections was 0 in each case. An analysis of variance on the pretest data revealed a significant difference between the experimental and control I group means on section 3c. These data are shown in Table 31.

Table 31 -- Elementary Pretest Means on Part I of the ODI (H_4)

ODI ITEMS	GROUP		t
	Control I (N=25)	Experimental (N=39)	
3a	0.384	0.354	0.275
Sec. 3b	1.855	1.703	0.439
3c	1.432	0.533	9.125**

The Part III items attempted to measure student perceptions of their own ability in eight school subjects, the clarity of their attitudes towards those subjects, and their clarity of preference for six different leisure time activities. Chi-square analyses on the pretest revealed that the experimental group had a frequency distribution significantly different from the control I group on perceived subject ability. Inspection of Table 32 shows that the experimental group had the greatest proportion of responses in the average ability category while the control group had the greatest proportion in the above average category. The Table also shows that there were no significant differences between the control I and experimental groups concerning their attitudes towards school subjects or their preferences for leisure time activities. Both groups appeared to be consistently certain of their likes and preferences.

Posttest data on the Part I sections of the ODI are shown in Table 33. These data revealed no significant differences between experimental and control group means.

The Part III posttest data revealed several significant differences. Table 34 indicates that the experimental group had the greatest proportion of responses in the perceived average ability category, while the control I group had the greatest proportion in the perceived above average category. The extent of significance is so great that the likelihood of this result occuring by chance alone is no more than one percent.

Table 32 -- Elementary Pretest Proportions on Part III of the ODI (H_4)

<table>
<tr><th rowspan="2">ODI
ITEMS</th><th colspan="12">GROUP</th><th rowspan="2">χ^2</th></tr>
<tr><th colspan="6">Control I
(N=26)</th><th colspan="6">Experimental
(N=44)</th></tr>
<tr><td>Part III</td><td colspan="2">BA[a]</td><td colspan="2">A[b]</td><td colspan="2">AA[c]</td><td colspan="2">BA[a]</td><td colspan="2">A[b]</td><td colspan="2">AA[c]</td><td></td></tr>
<tr><td>Sec. 1</td><td colspan="2">32</td><td colspan="2">80</td><td colspan="2">92</td><td colspan="2">67</td><td colspan="2">168</td><td colspan="2">92</td><td>15.96**</td></tr>
<tr><td></td><td colspan="3">Sure</td><td colspan="3">Not sure</td><td colspan="3">Sure</td><td colspan="3">Not sure</td><td></td></tr>
<tr><td>Sec. 2a</td><td colspan="3">160</td><td colspan="3">43</td><td colspan="3">238</td><td colspan="3">91</td><td>2.80</td></tr>
<tr><td>Sec. 2c</td><td colspan="3">119</td><td colspan="3">37</td><td colspan="3">194</td><td colspan="3">69</td><td>0.33</td></tr>
</table>

[a] Perceived school subject ability is Below Average.

[b] Perceived school subject ability is Average.

[c] Perceived school subject ability is Above Average.

Table 33 - - Elementary Posttest Means on Part I of the ODI (H_4)

ODI ITEMS	GROUP						C
	CONTROL		EXPERIMENTAL				F
	I (N=25)	II (N=44)	1 (N=14)	2 (N=17)	3 (N=8)	Total (N=39)	E/CI
Part I Sec. 3a	0.310	0.468	0.464	0.338	0.500	0.417	0.556
Sec. 3b	1.790	1.382	1.214	1.794	1.437	1.513	0.951
Sec. 3a	0.550	0.782	1.036	0.588	0.969	0.969	1.388

Table 33 - - Elementary Posttest Means on Part I of the ODI (H_4)

GROUP						COMPARISONS			
CONTROL		EXPERIMENTAL				F		*t*	
I (N=25)	II (N=44)	1 (N=14)	2 (N=17)	3 (N=8)	Total (N=39)	E/CI	E/CII	E_t/CI	E_t/CII
0.310	0.468	0.464	0.338	0.500	0.417	0.556	0.583	· ·	· ·
1.790	1.382	1.214	1.794	1.437	1.513	0.951	0.809	· ·	· ·
0.550	0.782	1.036	0.588	0.969	0.969	1.388	0.886	· ·	· ·

Table 34 -- Elementary Posttest Proportions on Part III of the ODI (H_4)

<table>
<tr><th rowspan="3">ODI
ITEMS</th><th colspan="9">GROUP</th><th colspan="2">χ^2</th></tr>
<tr><th colspan="3">Control I
(N=26)</th><th colspan="3">Control II
(N=26)</th><th colspan="3">Experimental
(N=44)</th><th rowspan="2">E_t/CI</th><th rowspan="2">E_t/CII</th></tr>
<tr><th>BA[a]</th><th>A[b]</th><th>AA[c]</th><th>BA[a]</th><th>A[b]</th><th>AA[c]</th><th>BA[a]</th><th>A[b]</th><th>AA[c]</th></tr>
<tr><td>Part III
Sec. 1</td><td>26</td><td>68</td><td>97</td><td>58</td><td>201</td><td>93</td><td>43</td><td>204</td><td>91</td><td>34.17**</td><td>1.99</td></tr>
<tr><td></td><td colspan="2">Sure</td><td>Not sure</td><td colspan="2">Sure</td><td>Not sure</td><td colspan="2">Sure</td><td>Not sure</td><td></td><td></td></tr>
<tr><td>Sec. 2a</td><td colspan="2">146</td><td>52</td><td colspan="2">275</td><td>75</td><td colspan="2">242</td><td>105</td><td>0.98</td><td>7.09*</td></tr>
<tr><td>2c</td><td colspan="2">123</td><td>33</td><td colspan="2">187</td><td>77</td><td colspan="2">165</td><td>196</td><td>48.48**</td><td>39.14**</td></tr>
</table>

[a] Perceived school subject ability is Below Average.

[b] Perceived school subject ability is Average.

[c] Perceived school subject ability is Above Average.

The control groups were also significantly clearer about their attitudes towards school subjects and their preferences for leisure time activities than the experimental group. A one-tailed χ^2 test was used to determine the levels of significance.

Junior High Level Findings: H_4

The parts of the ODI that related to this hypothesis were Part III, sections 1, 2a, and 2c, and Part IV, sections 2 and 3. The Part III items attempted to measure students' perceptions of their ability in eleven different school subjects, the clarity of their attitudes towards these subjects, and the clarity of their preferences for six different leisure time activities. The Part IV items attempted to measure 1) students' ability to identify a tentative occupational choice and classify that choice according to the Ten-Cluster system, 2) ability to explain why they would be good at the occupational choice selected, and 3) ability to give reasons for making the occupational choice. The scores for the Part IV items were calculated by finding the arithmetic mean of all the items in the two sections.[4]

Table 35 shows the results of the junior high pretest on the Part III items. χ^2 analysis revealed no significant differences between proportions for the control I and experimental groups concerning their perceived ability in school subjects or their clarity of preferences for leisure time activities.

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[4] See Appendixes P and O for a further explanation.

There was a significant difference between the groups concerning clarity of attitudes towards school subjects. The control group had a greater proportion of responses in the "like-not like" column than did the experimental group. These data indicate that the control group had a greater clarity of attitude towards school subjects than the experimental group on the pretest.

Table 35 -- Junior High Pretest Proportions on Part III of the ODI (H_4)

ODI ITEMS	GROUP						χ^2
	Control I (N=62)			Experimental (N=25)			
	BA[a]	A[b]	AA[c]	BA[a]	A[b]	AA[c]	
Part III Sec. 1	18	142	96	7	111	62	2.79
	Sure	Not sure		Sure	Not sure		
Sec. 2a	213	42		139	48		5.63*
Sec. 2c	271	101		99	51		2.43

[a] Perceived school subject ability is Below Average.
[b] Perceived school subject ability is Average.
[c] Perceived school subject ability is Above Average.

Analysis of the junior high pretest showed no significant differences between experimental and control group I means on the Part IV items. The data are shown in Table 36.

Table 36 - - Junior High Pretest Means on Part IV of the ODI (H4)

ODI ITEMS	GROUP		t
	Control I (N=53)	Experimental (N=25)	
Part IV Sec. 2 & 3	1.129	1.046	0.695

Part III posttest data, shown in Table 37, revealed significant differences between proportions for the control and experimental groups on the Section 1 items. Both control groups had a more balanced proportion of responses in the "average" and above average" columns than did the experimental group for the section 1 items. The latter group had its greatest proportion of responses in the "average" column. On the section 2c items, there were no significant differences in proportions.

The Part IV posttest data is shown in Table 38. No significant differences between means were found, even though the control groups had higher means that the experimental groups.

Senior High Level Findings: H4

The senior high data relative to this hypothesis overlap partially with data necessary for testing hypothesis 11. The investigative team has organized these data, and subsequent analyses, in such a way as

Table 37 -- Junior High Posttest Proportions on Part III of the ODI (H_4)

ODI ITEMS	GROUP									X^2	
	Control I (N=62)			Control II (N=48)			Experimental (N=25)			E_t/CI	E_t/CII
	BA[a]	A[b]	AA[c]	BA[a]	A[b]	AA[c]	BA[a]	A[b]	AA[c]		
Part III Sec. 1	40	245	194	32	186	145	7	125	67	9.95**	9.65**
	Sure	Not sure		Sure	Not sure		Sure	Not sure			
Sec. 2a	390	85		295	67		160	49		2.84	1.99
Sec. 2c	288	84		213	75		103	47		4.36	1.37

[a] Perceived school subject ability is Below Average.

[b] Perceived school subject ability is Average.

[c] Perceived school subject ability is Above Average.

Table 38 -- Junior High Posttest Means on Part IV of the ODI (H_4)

ODI ITEMS	GROUP					COMPAR	
	CONTROL		EXPERIMENTAL			F	
	I (N=53)	II (N=46)	1 (N=14)	2 (N=11)	Total (N=25)	E/CI	E/CII
Part IV Sec. 2 & 3	1.084	1.163	0.826	0.977	0.893	1.178	3.125

ble 38 -- Junior High Posttest Means on Part IV of the ODI (H_4)

GROUP				COMPARISONS			
ROL	EXPERIMENTAL			F		t	
II (N=46)	1 (N=14)	2 (N=11)	Total (N=25)	E/CI	E/CII	E_t/CI	E_t/CII
1.163	0.826	0.977	0.893	1.178	3.125	. .	. .

to minimize decision errors. The ODI items relative to this hypothesis are Part III, sections 1, 2a, and 2c; and Part IV, sections 3 and 6. The Part III items attempted to assess students' perceptions of their ability in eleven school subjects, their attitudes towards those subjects, and their preferences for six different leisure time activities.

Table 39 shows the results of the χ^2 analysis on the Part III items on the pretest. There were no significant differences between proportions.

Table 39 - - Senior High Pretest Proportions on Part III of the ODI (H_4)

ODI ITEMS	GROUP						χ^2
	Control I (N=50)			Experimental (N=33)			
	BA[a]	A[b]	AA[c]	BA[a]	A[b]	AA[c]	
Part III Sec. 1	26	148	109	15	122	77	1.41
	Sure	Not sure		Sure	Not sure		
Sec. 2a	277	59		185	44		0.25
Sec. 2c	225	73		141	57		1.13

[a] Perceived ability in school subjects as Below Average.
[b] Perceived ability in school subjects as Average.
[c] Perceived ability in school subjects as Above Average.

The Part IV items attempted to measure, according to judges' ratings, students abilities to provide a rationale for a tentative career choice based on perceived interests and abilities. The means shown in Table 40 are arithmetic averages for the pretest experimental group.[5] Because of scheduling difficulties this portion of the ODI was not administered to the control I group.

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[5] See Appendixes AA and AB

Table 40 -- Senior High Pretest Means on Part IV of the ODI (H4)

ODI ITEMS	GROUP		t
	Control I [a]	Experimental (N=26	
Part IV Sec. 3 & 6	N.A.	.913	. .

[a] Scheduling difficulties precluded administration of these items to the control I group.

Posttest data on the Part III items revealed no significant differences between proportions for the control and experimental groups. These data are shown in Table 41. Posttest data on the Part IV items revealed a significant difference between the control II and the total experimental group. These data are shown in Table 42.

The findings of the elementary, junior and senior high levels did not support the hypothesis that students who participated in the CCEDP program could recognize significantly more clearly their own tentative strengths, weaknesses or interests than students who did not participate in the CCEDP program. Data at all three levels suggested that the control groups were clearer about their strenghts, weaknesses, and interests than the experimental group.

Table 41 -- Senior High Posttest Proportions on Part III of the ODI (H_4)

ODI ITEMS	GROUP									χ^2	
	Control I (N=50)			Control II (N=84)			Experimental (N=33)			E_t/CI	E_t/CII
	BA^a	A^b	AA^c	BA^a	A^b	AA^c	BA^a	A^b	AA^c		
Part III Sec. 1	31	180	140	50	342	292	12	100	101	4.04	1.80
	Sure	Not sure		Sure	Not sure		Sure	Not sure			
Sec. 2a	304	54		566	120		187	43		1.33	0.17
Sec. 2c	226	73		372	132		153	45		0.19	0.90

[a] Perceived school subject ability is Below Average.

[b] Perceived school subject ability is Average.

[c] Perceived school subject ability is Above Average.

Table 42 -- Senior High Posttest Means on Part IV of the ODI (H4)

ODI ITEMS	GROUP						CO	
	CONTROL		EXPERIMENTAL				F	
	I	II (N=80)	1 (N=12)	2 (N=8)	3 (N=6)	Total (N=26)	E/CI	E/
Part IV Sec. 3 &6	N.A.	1.496	1.208	1.646	1.347	1.375	. .	.

Table 42 -- Senior High Posttest Means on Part IV of the ODI (H_4)

GROUP						COMPARISONS			
CONTROL		EXPERIMENTAL				F		t	
I	II (N=80)	1 (N=12)	2 (N=8)	3 (N=6)	Total (N=26)	E/CI	E/CII	E_t/CI	E_t/CII
N.A.	1.496	1.208	1.646	1.347	1.375	. .	. .	. .	3.071^{**}

H_5 Students who participated in the CCEDP program will know significantly more occupational words and terms, as measured by the ODI, than students who did not participate in the CCEDP program.

Elementary Level Findings: $\underline{H}_5$

Part II of the ODI attempted to measure student knowledge of occupational words and terms. As a fifteen-item vocabulary test, the results of the pretest showed no significant differences between the experimental and control I means. These data are shown in Table 43.

Table 43 -- Elementary Pretest Means on Part II of the ODI (H_5)

ODI ITEMS	GROUP		*t*
	Control I (N=26)	Experimental (N=43)	
Part II 1 - 15	6.654	7.721	1.459

Elementary posttest data,, shown in Table 44, indicate significant F values on an analysis of variance comparing the three experimental groups with each control group. Further *t*-test analysis indicated that the significant F values existed between the experimental groups themselves and not between the total experimental and either control group.

Table 44 - Elementary Posttest Means on Part II of the ODI (H_5)

GROUP						COMPARISONS			
CONTROL		EXPERIMENTAL				F		t	
I (N=26)	II (N=26)	1 (N=17)	2 (N=17)	3 (N=9)	Total (N=43)	E/CI	E/CII	E_t/CI	E_t/CII
8.385	10.432	9.353	10.941	7.778	9.349	4.278**	3.978*	1.231	1.703

Junior High Level Findings: H_5

This fifteen-item Part II of the junior high level ODI was designed to test student knowledges of occupational vocabulary. The highest possible score on this part of the ODI was fifteen and the lowest, 0. Table 45 shows the results of the pretest data.

Table 45 --Junior High Pretest Means on Part II of the ODI (H_5)

ODI ITEMS	GROUP		t
	Control I (N=64)	Experimental (N=25)	
Part II 1-15	10.484	11.480	1.607

Table 45 shows no significant difference between the experimental and control I group means. Table 46 shows the results of the posttest data on Part II. Here again, there were no significant differences between the control and experimental group means.

Table 46 - - Junior High Posttest Means on Part II of the ODI (H_5)

ODI ITEMS	GROUP					COMPA	
	CONTROL		EXPERIMENTAL			F	
	I (N=64)	II (N=46)	1 (N=13)	2 (N=12)	Total (N=25)	E/CI	E/CII
Part II 1-15	12.516	12.978	12.385	13.417	12.880	0.883	0.586

ble 46 - - Junior High Posttest Means on Part II of the ODI (H_5)

GROUP				COMPARISONS			
TROL	EXPERIMENTAL			F		t	
II (N=46)	1 (N=13)	2 (N=12)	Total (N=25)	E/CI	E/CII	E_t/CI	E_t/CII
12.978	12.385	13.417	12.880	0.883	0.586	. .	. .

Senior High Level Findings: H_5

The twenty-item Part II of the senior high ODI was used relative to this hypothesis. The highest possible score on this part was twenty and the lowest, 0.

Table 47 shows the results of the Part II pretest. Note that there was no significant difference between the control I and experimental group means.

Table 47 -- Senior High Pretest Means on Part II of the ODI (H_5)

ODI ITEMS	GROUP		t
	Control I (N=53)	Experimental (N=33)	
Part II 1-20	12.623	12.848	0.334

The posttest data analysis revealed no significant differences between experimental and control group means. Table 48 presents these data.

Table 48 - - Senior High Posttest Means on Part II of the ODI (H_5)

ODI ITEMS	GROUP						COMP	
	CONTROL		EXPERIMENTAL				F	
	I (N=53)	II (N=92)	1 (N=13)	2 (N=11)	3 (N=9)	Total (N=33)	E/CI	E/CII
Part II 1-20	14.151	15.011	15.846	14.182	13.556	14.667	1.088	1.06

Table 48 - - Senior High Posttest Means on Part II of the ODI (H_5)

GROUP						COMPARISONS			
CONTROL		EXPERIMENTAL				F		t	
3)	II (N=92)	1 (N=13)	2 (N=11)	3 (N=9)	Total (N=33)	E/CI	E/CII	E_t/CI	E_t/CII
151	15.011	15.846	14.182	13.556	14.667	1.088	1.065	. .	. .

These data do not support the hypothesis that the students who participated in the CCEDP program knew significantly more occupational words and terms, as measured by the ODI, then students who did not participate in the CCEDP program.

H_6: Students who participated in the CCEDP program will view themselves as significantly more potentially valuable and productive members of society, as measured by the ODI, than students who did not participate in the CCEDP program.

Elementary Level Findings: H_6

The ODI items that related to this hypothesis were those in Part III, section 3a. The items attempted to measure students' self-concept according to their responses to statements that described or did not describe them. The highest possible score was 7 and the lowest, 0. Table 49 shows the results of the pretest. There was no significant difference between the experimental and control I groups.

Table 49 -- Elementary Pretest Means of Part III of the ODI (H_6)

ODI ITEMS	GROUP		t
	Control I (N=26)	Experimental (N=44)	
Part III Sec. 3a	4.269	4.545	0.795

The results of the posttest showed no significant differences, even though the control II group received the higher mean score. The posttest data are shown in Table 50.

Table 50 -- Elementary Posttest Means on Part III of the ODI (H_6)

ODI ITEMS	GROUP						C	
	CONTROL		EXPERIMENTAL				F	
	I (N=26)	II (N=26)	1 (N=18)	2 (N=17)	3 (N=9)	Total (N=44)	E/CI	E
Part III Sec. 3a	4.346	5.023	4.333	4.823	3.778	4.409	1.312	2

able 50 -- Elementary Posttest Means on Part III of the ODI (H_6)

GROUP						COMPARISONS			
CONTROL		EXPERIMENTAL				F		t	
I (N=26)	II (N=26)	1 (N=18)	2 (N=17)	3 (N=9)	Total (N=44)	E/CI	E/CII	E_t/CI	E_t/CII
4.346	5.023	4.333	4.823	3.778	4.409	1.312	2.330	. .	. .

Junior High Level Findings: H_6

Part III, Section 3a included all the items relative to this hypothesis. Essentially parallel to the elementary Part III, Section 3a, these items attempted to measure student self concept. The highest possible score was 7 and the lowest, 0. Table 51 shows no significant difference between the experimental and control I group means on the pretest.

Table 51 -- Junior High Pretest Means on Part III of the ODI (H_6)

ODI ITEMS	GROUP		t
	Control I (N=62)	Experimental (N=25)	
Part III Sec. 3a	5.548	5.640	0.283

The results of the posttest data are shown in Table 52. Again, there were no significant differences between means of the experimental and control groups, even though both control groups had higher means than the total experimental group.

Senior High Level Findings: H_6

Part III, Section 3a, items 33,36,39,40,41,44,47, and 48 related to testing this hypothesis. Since no "correct" responses were determined

Table 52 -- Junior High Posttest Means on Part III of the ODI (H_6)

CDI ITEMS	GROUP					COMPARI	
	CONTROL		EXPERIMENTAL			F	
	I (N=62)	II (N=48)	1 (N=13)	2 (N=12)	Total (N=25)	E/CI	E/CII
Part III Sec. 3a	6.000	5.729	5.539	5.833	5.680	0.880	0.169

ble 52 -- Junior High Posttest Means on Part III of the ODI (H_6)

GROUP				COMPARISONS			
ROL	EXPERIMENTAL			F		t	
II (N=48)	1 (N=13)	2 (N=12)	Total (N=25)	E/CI	E/CII	E_t/CI	E_t/CII
5.729	5.539	5.833	5.680	0.880	0.169	. .	. .

for these items, analysis was done using χ^2 to test significant differences between proportions. The results of the pretest are shown in Table 53. There was no significant difference between proportions of the responses of the control I and experimental groups.

Table 53 - - Senior High Pretest Proportions on Part III of the ODI (H_6)

ODI ITEMS	GROUP				χ^2
	Control I (N=50)		Experimental (N=33)		
	Like Me	Not like me	Like Me	Not like me	
Sec. 3a: 33, 36, 39-41 44, 47, 48	128	259	81	182	0.37

The results of the posttest analysis shown in Table 54 revealed a significant difference between the total experimental and Control II group. The experimental group had a greater proportion of responses in the "not like me" column than the control II group. These data suggest that the control II group had a more positive self-concept than the experimental group.

Table 54 - - Senior High Posttest Proportions on Part III of the ODI (H_6)

ODI ITEMS	GROUP						χ^2	
	Control I (N=50)		Control II (N=84)		Experimental (N=33)		E_t/CI	E_t/CII
	Like me	Not like me	Like Me	Not like me	Like me	Not like me		
Sec. 3a: 33, 36, 39-41 44, 47, 48	100	300	205	461	58	206	0.81	7.24*

There were no significant differences between means at the elementary and junior high levels. At the senior high level there was a significant difference between proportions suggesting a more positive self-concept for the control II group. These results do not support the hypothesis that students who participated in the CCEDP program will view themselves as significantly more potentially valuable and productive members of society, as measured by the ODI, than students who did not participate in the CCEDP program.

H_7: Students who participated in the CCEDP program will be significantly more aware of the importance of good interpersonal relationships in general and in job success, as measured by the ODI, than students who did not participate in the CCEDP program.

Elementary Level Findings: H_7

The ODI items that related to this hypothesis were in Part III, section 3b, items 4,5,6, and 9. The highest possible score for these items was 4 and the lowest, 0. Table 55 shows the results of the pretest on these items. There was no significant difference between means for the control I and experimental groups.

Table 55 -- Elementary Pretest Means on Part III of the ODI (H_7)

ODI ITEMS	GROUP		t
	Control I (N=25)	Experimental (N=39)	
Part III Sec. 3b: 4,5,6,9	2.154	2.1136	0.165

The results of the posttest indicated a significant difference between means for the total experimental group and the control II group. In this comparison the control II group had a significantly higher mean than the experimental group. These data are shown in Table 56.

Table 56 -- Elementary Posttest Means on Part III of the ODI (H_7)

ODI ITEMS	GROUP						CO	
	CONTROL		EXPERIMENTAL				F	
	I (N=26)	II (N=26)	1 (N=18)	2 (N=17)	3 (N=9)	Total (N=44)	E/CI	E/C
Part III Sec. 3b: 4,5,6,9	2.423	2.455	2.056	1.647	2.000	1.886	2.007	2.4

Table 56 -- Elementary Posttest Means on Part III of the ODI (H_7)

GROUP						COMPARISONS			
CONTROL		EXPERIMENTAL				F		t	
I N=26)	II (N=26)	1 (N=18)	2 (N=17)	3 (N=9)	Total (N=44)	E/CI	E/CII	E_t/CI	E_t/CII
.423	2.455	2.056	1.647	2.000	1.886	2.007	2.438**	. .	2.531*

Junior High Level Findings: H_7

The parts of the ODI that related to this hypothesis were Part III, section 3b, items 42, 47, 51 and 52. The highest possible score on these items was 4 and the lowest, 0.

Table 57 shows the results of the pretest on these items. There was no significant difference between the experimental and control I group means.

Table 57 -- Junior High Pretest Means on Part III of the ODI (H_7)

ODI ITEMS	GROUP		t
	Control I (N=62)	Experimental (N=25)	
Part III Sec. 3b: 42,47,51,52	2.718	2.560	0.6108

The results of the posttest are shown in Table 58. Again, there were no significant differences between the means of the experimental and either control group.

Senior High Level Findings: H_7

The parts of the ODI relative to this hypothesis were Part III, section 3b, items 53, 58, 62, and 63. The highest possible score on these items was 4 and the lowest, 0. The results of the pretest indicate no significant difference between the experimental and control I group means. These data are shown in Table 59.

Table 58 -- Junior High Posttest Means on Part III of the ODI (H_7)

ODI ITEMS	GROUP					COMPA	
	CONTROL		EXPERIMENTAL			F	
	I (N=62)	II (N=48)	1 (N=13)	2 (N=12)	Total (N=25)	E/CI	E/CII
Part III Sec. 3b: 42,47,51, 52	3.113	2.958	2.923	3.167	3.040	0.321	0.269

Table 58 -- Junior High Posttest Means on Part III of the ODI (H_7)

GROUP				COMPARISONS			
TROL	EXPERIMENTAL			F		t	
II (N=48)	1 (N=13)	2 (N=12)	Total (N=25)	E/CI	E/CII	E_t/CI	E_t/CII
2.958	2.923	3.167	3.040	0.321	0.269	. .	. .

Table 59 -- Senior High Pretest Means on Part III of the ODI (H_7)

ODI ITEMS	GROUP		t
	Control I (N = 50)	Experimental (N = 33)	
Part III Sec. 3b: 53, 58, 62, 63	3.000	3,061	0.309

The posttest analysis showed no significant differences between means for the experimental and either control group. These data are shown in Table 60.

Table 60 - - Senior High Posttest Means on Part III of the ODI (H_7)

ODI ITEMS	GROUP						CO	
	CONTROL		EXPERIMENTAL				F	
	I (N=50)	II (N=84)	1 (N=13)	2 (N=11)	3 (N=9)	Total (N=33)	E/CI	E
Sec. 3b: 53, 58, 62, 63	3.020	3.048	3.461	2.909	3.444	3.273	1.643	1

Table 60 - - Senior High Posttest Means on Part III of the ODI (H_7)

GROUP						COMPARISONS			
CONTROL		EXPERIMENTAL				F		t	
I (N=50)	II (N=84)	1 (N=13)	2 (N=11)	3 (N=9)	Total (N=33)	E/CI	E/CII	E_t/CI	E_t/CII
3.020	3.048	3.461	2.909	3.444	3.273	1.643	1.551	. .	. .

H_8: Secondary school students who participated in the CCEDP program will have significantly more knowledge about the educational avenues to career choices, as measured by the ODI, than secondary school students who did not participate in the CCEDP program.

H_9: Secondary school students who participated in the CCEDP program will be significantly more aware of the relationships between school subjects and the world of work, as measured by the ODI, than secondary school students who did not participate in the CCEDP program.

Because of the inherent similarity between these two hypotheses, the data relative to each of them are presented in a single section.

Elementary Level Findings: H_8, H_9

The elementary level findings indicated that the control II group had a mean significantly higher than the experimental group following a one-tailed t-test analysis. There were no significant differences between means at the junior or senior high levels. These data did not support the hypothesis that students who participated in the CCEDP program will be significantly more aware of the importance of good interpersonal relationships in general and in job success, as measured by the ODI, than students who did not participate in the CCEDP program.

Junior High Level Findings: H_8, H_9

The parts of the ODI relative to these hypotheses were Part I, section 3, tiems 37-44, and Part IV, sections 4 and 5. The highest possible score on the Part I items was 8 and the lowest, 0. These items measured student ability to relate school subject content with selected occupations. The Part IV sections were interview judges' ratings of student ability to 1) list job information sources, and 2) tell what education or training is required for an occupation selected by the student. Judges' scores depended on the number of information sources named and the accuracy of the training as told by the respondent. The results of the pretest and of the posttest revealed no significant differences between means for the experimental and control groups. These data are shown in Tables 61 and 62, respectively.

Table 61 -- Junior High Pretest Means on Parts I and IV of the ODI (H_8, H_9)

ODI ITEMS	GROUP		t
	Control I (N=64)	Experimental (N=25)	
Part I Sec. Sec. 3	6.484	6.880	1.624
Part IV Sec. 4 & 5	(N=53) 1.020	1.260	1.583

Table 62 -- Junior High Posttest Means on Parts I and IV of the ODI (H_8,H_9

ODI ITEMS	GROUP					COMPARI	
	CONTROL		EXPERIMENTAL			F	
	I (N=64)	II (N=46)	1 (N=13)	2 (N=12)	Total (N=25)	E/CI	E/CII
Part I Sec. 3	7.250	7.196	7.385	7.667	7.520	0.829	1.025
Part IV Sec. 4 & 5	(N=53) 1.097	1.224	(N=14) 1.143	(N=11) 1.205	1.170	0.189	0.212

e 62 -- Junior High Posttest Means on Parts I and IV of the ODI (H_8, H_9)

GROUP				COMPARISONS			
ROL	EXPERIMENTAL			F		$\underline{t}$	
II (N=46)	1 (N=13)	2 (N=12)	Total (N=25)	E/CI	E/CII	E_t/CI	E_t/CII
7.196	7.385	7.667	7.520	0.829	1.025	. .	. .
1.224	(N=14) 1.143	(N=11) 1.205	1.170	0.189	0.212	. .	. .

Note that the scores for the Part I items were higher on the posttest than on the pretest; however, the differences between the experimental and control groups were not significant.

Senior High Level Findings: H_8, H_9

The parts of the ODI relative to these hypotheses were in Part IV, sections 4 and 5. The means were computed from judges ratings of students' knowledge of 1) job information, 2) the training needed for jobs, 3) the relationship of school subjects and the world of work, and 4) rationale for suggested changes in school program.

Table 63 shows the results of the pretest interview. Note that there is no data entered for the control I group. This group was not interviewed because of interview administration difficulties.

Table 63 -- Senior High Pretest Means on Part IV of the ODI (H_8, H_9)

ODI ITEMS	GROUP		t
	Control I . .	Experimental (N=26)	
Part IV Sec. 4 & 5	NA*	.715	. .

* Not available

Table 64 shows the results of the interview data on the posttest. Note that there is no entry for the control I group for reasons already cited. There was a significantly higher rating for the control II group.

Table 64 -- Senior High Posttest Means on Part IV of the ODI (H_8, H_9)

ODI ITEMS	GROUP		t
	Control II (N=80)	Experimental (N=26)	
Part IV Sec. 4 & 5	1.526	1.043	4.022**

The junior and senior high level data do not support the hypotheses that students who participated in the CCEDP program had significantly more knowledge about the educational avenues to career choices, or were significantly more aware of the relationships between school subjects and the world of work, as measured by the ODI, than secondary school students who did not participate in the CCEDP program. Results at the senior high level suggest that the control II group was more aware of the extent of school-work relationships than the experimental group.

H_{10}: Students who participated in the CCEDP program will know significantly more about the effect of occupations on personal life style, as measured by the ODI, than students who did not participate in the ODI.

Elementary Level Findings: H_{10}

Part I, Section 5 was designed to test this hypothesis at the elementary level. Students were asked to classify jobs according to their effect on home and life style. One occupation, "Newspaper Reporter," was eliminated from the scoring because of ambiguity. The highest possible score on these items was 23 and the lowest, 0. The results of the pretest are shown in Table 65.

Table 65 - - Elementary Pretest Means on Part I, Section 5 of the ODI (H_{10})

GROUP		t
Control I (N = 25)	Experimental (N = 39)	
20.840	19.744	1.777*

Because of the significant difference between the control I and experimental group means, an analysis of covariance was conducted on the posttest results. The results of this analysis are shown in Table 66.

Table 66- - Elementary Posttest Means on Part I, Section 5 of the ODI (H_{10})

GROUP						COMPARISONS			
CONTROL		EXPERIMENTAL				F		t	
I (N = 25)	II (N = 44)	1 (N = 14)	2 (N = 17)	3 (N = 8)	Total (N = 39)	E/CI	E/CII	E_t/CI	E_t/CII
20.880	20.705	21.571	19.765	19.500	20.359	2.795*	2.437	0.925	. .

Table

Table 65 shows that the analysis of covariance between the experimental and control I groups indicated a significant difference between means. Further one-tailed t-test analysis revealed no significant difference, however, between the total experimental group and the control I group.

Junior High Level Findings: H_{10}

The part of the ODI relative to this hypothesis was Part I, Section 5. The six items in this section were designed to measure student knowledge of the effects of jobs on home and life style. The highest possible score was 6 and the lowest, 0. Table 67 shows the results of the pretest on these ODI items.

Table 67 - - Junior High Pretest Means on Part I, Section 5 of the ODI (H_{10})

GROUP		t
Control I (N = 64)	Experimental (N = 25)	
4.781	5.230	2.313*

Table 68 -- Junior High Posttest Means on Part I, Section 5 of the ODI (

GROUP					COMPARISO		
CONTROL		EXPERIMENTAL			F		
I (N = 64)	II (N = 46)	1 (N = 13)	2 (N = 12)	Total (N = 25)	E/CI	E/CII	E_t/
5.406	5.391	5.385	5.833	5.600	0.481	1.197	.

ble 68 -- Junior High Posttest Means on Part I, Section 5 of the ODI (H_{10})

GROUP				COMPARISONS			
L	EXPERIMENTAL			F		t	
II	1	2	Total	E/CI	E/CII	E_t/CI	E_t/CII
= 46)	(N = 13)	(N = 12)	(N = 25)				
.391	5.385	5.833	5.600	0.481	1.197	. .	. .

Table 67 shows that the experimental group mean was significantly different from the control I group mean. Posttest analyses, shown in Table 68, reveal no significant differences between control and experimental group means.

Senior High Level Findings: H_{10}

The part of the ODI relative to this hypothesis was Part I, Section 4. These six items attempted to measure student knowledge of the relationship between jobs and home and life style. The highest possible score on this Section was 6 and the lowest, 0. Table 69 shows the results of the pretest. Note that there were no significant differences between control I and experimental group means.

Table 69 - - Senior High Pretest Means on Part I, Section 4 of the ODI (H_{10})

GROUP		t
Control I (N = 53)	Experimental (N = 33)	
5.264	5.212	0.191

The results of the posttest revealed no significant differences between control and experimental group means. These data are shown in Table 70.

Table 70. -- Senior High Posttest Means on Part I, Section 4 of the ODI (H_{10})

GROUP						COMPARISONS			
CONTROL		EXPERIMENTAL				F		t	
I (N = 53)	II (N = 92)	1 (N = 13)	2 (N = 11)	3 (N = 9)	Total (N = 33)	E/CI	E/CII	E_t/CI	E_t/CI
5.509	5.630	5.615	5.636	5.222	5.515	0.686	0.303	. .	. .

These data do not support the hypothesis that students who participated in the CCEDP program knew significantly more about the effect of occupations on personal life style, as measured by the ODI, than students who did not participate in the CCEDP program.

H_{11}: Secondary school students who participated in the CCEDP program will be significantly more aware of occupational decision making factors, as measured by the ODI, than secondary school students who did not participate in the CCEDP program.

Junior High Level Findings: H_{11}

The parts of the ODI that related to this hypothesis were in Part III, sections 3b, items 39, 43, 44, and 50, and 3c, items 53-72. The section 3b items concerned occupational decision making factors. The highest possible score on these items was 4 and the lowest, 0. The pretest means are shown in Table 71. The results showed no significant differences between means.

Table 71. -- Junior High Pretest Means on Part III, Section 3b of the ODI (H_{11})

ODI ITEMS	GROUP		t
	Control I (N = 64)	Experimental (N = 25)	
Part III Sec. 3b 39, 43, 44, 50	2.742	2.920	0.748

The twenty Part III, section 3c items attempted to measure the clarity of student values regarding job selection. χ^2 analysis revealed that the proportion of responses on the pretest was not significantly different between the control I and experimental groups. Table 72 presents these data.

It is important to note that these items were not designed to learn what students values were; rather to learn whether students were clear about whatever values they had. For this reason, responses in the "somewhat important" column were interpreted to mean that the respondent was not clear about the given value. Responses in the "not very important", or "very important" were interpreted as the respondent being clear.

Table 72. -- Junior High Pretest Proportions on Part III of the ODI (H_{11})

ODI ITEMS	GROUP				X^2
	Control I (N = 52)		Experimental (N = 25)		
	N-VI[a]	SI[b]	N-VI[a]	SI[b]	
Part III Sec. 3c:	778	456	317	180	0.08

[a] Responses in this column refer to student value judgments of ODI statements as either "not very important" or "very important."

[b] Responses in this column refer to student value judgments of ODI statements as "somewhat important."

Inspection of the Table reveals no significant difference between proportions on the pretest.

The posttest data on the Part III, section 3b items reveals no significant differences between experimental and control group means. These data are shown in Table 73.

Table 73 -- Junior High Posttest Means on Part III of the ODI (H_1)

ODI ITEMS	GROUP					COMPAR	
	CONTROL		EXPERIMENTAL			F	
	I (N=62)	II (N=48)	1 (N=13)	2 (N=12)	Total (N=25)	E/CI	E/CII
Part III Sec. 3b: 39,43,44, 50	3.177	3.146	3.077	3.417	3.240	0.563	0.661

-- Junior High Posttest Means on Part III of the ODI (H_{11})

GROUP				COMPARISONS			
ROL	EXPERIMENTAL			F		t	
II (N=48)	1 (N=13)	2 (N=12)	Total (N=25)	E/CI	E/CII	E_t/CI	E_t/CII
3.146	3.077	3.417	3.240	0.563	0.661	. .	. .

Table 74 shows the results of the posttest χ^2 analysis on the Part III, Section 3c items. No significant differences between proportions were found for the experimental and either control group.

Table 74 - - Junior High Posttest Proportions on Part III of the ODI (H_{11})

ODI ITEMS	GROUP						χ^2	
	Control I (N=62)		Control II (N=48)		Experimental (N=25)		E_t/CI	E_t/CII
	N-VI[a]	SI[b]	N-VI[a]	SI[b]	N-VI[a]	SI[b]		
Part III Sec. 3c: 53-72	778	459	606	309	311	189	0.07	2.30

[a] Responses as "Not Very Important" or "Very Important."

[b] Responses as "Somewhat Important."

Senior High Level Findings: H_{11}

Part III, Section 3c of the ODI was used to test this hypothesis at the senior high level. Scoring and interpretation was the same as the parallel part of the junior high ODI.

Table 75 shows a significant difference between proportions for the experimental and control I groups. A two-tailed χ^2 analysis was used.

Table 75 - - Senior High Pretest Proportions on Part III of the ODI (H_{11})

ODI ITEMS	GROUP				χ^2
	Control I (N=50)		Experimental (N=33)		
	N-VI^a	SI^b	N-VI^a	SI^b	
Part III Sec. 3c:	647	299	409	235	4.10*

[a] Responses as "Not Very Important" or "Very Important."

[b] Responses as "Somewhat Important."

Posttest analysis revealed no significant differences between control group and experimental group responses proportions. These data are shown in Table 76.

Table 76 - - Senior High Posttest Proportions on Part III of the ODI (H_{11})

ODI ITEMS	GROUP						χ^2	
	Control I (N=50)		Control II (N=84)		Experimental (N=33)		E_t/CI	E_t/CII
	N-VI^a	SI^b	NI-V^a	SI^b	N-VI^a	SI^b		
Part III Sec.3c:	682	311	1124	553	439	220	0.77	0.04

[a] Responses as "Not Very Important" or "Very Important."

[b] Responses as "Somewhat Important."

These data do not support the hypothesis that secondary school students who participated in the CCEDP program were significantly more aware of occupational decision-making factors, as measured by the ODI, than secondary school students who did not participate in the CCEDP program.

H_{12}: The parents of students who participated in the CCEDP program will be significantly more aware of opportunities for occupational education in the schools, as measured by the Parents' Questionnaire for the CCEDP, than parents whose children did not participate in the CCEDP program.

A questionnaire concerned with assessing awareness of CCEDP was sent to parents of elementary and junior high students in control group II and in the experimental group. Among elementary experimental group, three out of a possible seventy-two questionnaires were completed and returned. At the junior high level fourteen out of a possible seventy-five was returned. From control group II, at the elementary level, one out of a possible forty-five was returned. At the high school level, one out of a possible eighty-seven was returned. A total of 459 questionnaires were sent out and nineteen were returned. One indirect measure of growth in parental awareness of CCEDP was determined by the change in the number of returned questionnaires at the time of the posttesting.

According to data recieved from the CCEDP staff, posttest questionnaires were mailed to forty-six elementary, forty-seven junior high and thirty-four senior high experimental group parents. Three of the elementary were returned, eight of the junior high were returned, and five at the senior high were returned. A total of 127 posttest questionnaires were sent out and sixteen were returned. Because fewer posttest than pretest questionnaires were returned, the data do not support the hypothesis.

SUMMARY

A two-year longitudinal study was conducted by the Department of Evaluation and Research of the Educational Research Council of America to evaluate student learning in occupational and career education. The primary research was conducted in the Muskegon and Muskegon Heights, Michigan, school systems and included 715 elementary, junior, and senior high school students. This number comprised 202 children in the experimental group and 513 in two control groups. Students were selected according to a stratified random sampling procedure.

An instrument called the Occupational Development Inventory (ODI) was developed for the three grade levels. It was designed to test knowledges and awarenesses in eleven program objectives:

1. Worth and importance of occupations
2. Common characteristics of occupations
3. Occupational opportunities
4. Relation of individual strengths, weaknesses, and interests to occupations
5. Occupational vocabulary
6. Positive self-concept
7. Human relationships
8. Educational avenues to career choices
9. Relationship between school subjects and work
10. Occupations and life styles
11. Occupational decision making

A parent questionnaire was also designed to assess parental awareness of occupational education in the schools.

The ODI attempted to measure student development in occupational knowledge, vocabulary, interest, attitude, and values, and planning. Reading and writing were kept to a minimum. Several constructs were used, including interview techniques, objective test items, survey questions, and forced-choice items.

The instrument was used to test the following hypotheses:

H_1: Students who participated in the CCEDP program will know significantly more about the worth and importance of occupations, as measured by the ODI, than students who did not participate in the CCEDP program.

H_2: Students who participated in the CCEDP program will know significantly more about the common characteristics of occupations, as measured by the ODI, than students who did not participate in the CCEDP program.

H_3: Students who participated in the CCEDP program will know significantly more about occupational opportunities, as measured by the ODI, than students who did not participate in the CCEDP program.

H_4: Students who participated in the CCEDP program will recognize significantly more clearly their own tentative strengths, weaknesses, and interests, as measured by the ODI, than students who did not participate in the CCEDP program.

H_5: Students who participated in the CCEDP program will know significantly more occupational words and terms, as measured by the ODI, than students who did not participate in the CCEDP program.

H_6: Students who participated in the CCEDP program will view themselves as significantly more potentially valuable and productive members of society, as measured by the ODI, than students who did not participate in the CCEDP program.

H_7: Students who participated in the CCEDP program will be significantly more aware of the importance of good interpersonal relationships in general and in job success, as measured by the ODI, than students who did not participate in the CCEDP program.

H_8: Secondary school students who participated in the CCEDP program will have significantly more knowledge about the educational avenues to career choices, as measured by the ODI, than secondary school students who did not participate in the CCEDP program.

H_9: Secondary school students who participated in the CCEDP program will be significantly more aware of the relationships between school subjects and the world of work, as measured by the ODI, than secondary school students who did not participate in the CCEDP program.

H_{10}: Students who participated in the CCEDP program will know significantly more about the effect of occupations on personal life style, as measured by the ODI, than students who did not participate in the CCEDP program.

H_{11}: Secondary school students who participated in the CCEDP program will be significantly more aware of occupational decision-making factors, as measured by the ODI, than secondary school students who did not participate in the CCEDP program.

H_{12}: The parents of students who participated in the CCEDP program will be significantly more aware of opportunities for occupational education in the schools, as measured by the Parent's Questionnaire for the CCEDP, than parents whose children did not participate in the CCEDP program.

The ODI was administered as a pretest to the experimental and two control groups. The control I and II groups were selected to match the experimental group in terms of socioeconomic and enthnic backgrounds. The control II group included students from outside the immediate school districts and who were two grade levels above the control I group. The purpose of this was to establish base-line data for future posttesting of the experimental and control I group. The results of the ODI did not support any of the hypotheses. When significant differences were found, they suggested that the control groups did better, i.e., scored higher, than the experimental groups.

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IMPLICATIONS, CONCLUSIONS, RECOMMENDATIONS FOR THE FUTURE

Implications

The major question that guided the research evaluation was "to what extent did the students who participated in the CCEDP achieve the objectives of the program?" Student outcome objectives were developed for the elementary, junior, and senior high levels. The student objectives were used to develop the hypotheses to be tested. There were twelve in number. The Occupational Development Inventory (ODI) was constructed to measure achievement in four major areas: occupational knowledge, occupational vocabulary, occupational planning, and occupational interests, attitudes, and values. In testing the hypotheses, differences were considered significant only if .05 or better.

Although there were selected test sections where experimental groups had means which were significantly higher than the control group means, there were also test sections where control group means were significantly higher than experimental group means. All twelve hypotheses tested failed to meet the .05 level of significance. There was failure to reject the null hypotheses (Ho).

The proposed program appeared sound as planned. The project staff was competent, many resources necessary for implementing it were available and the evaluation procedures appeared valid. But, the program did not achieve the expected results - at least, not on paper or statistically.

Several factors now need to be taken into consideration. Was the program too ambitious as planned for the limited duration of the project? The resources necessary to do the job may have been lacking or insufficient. The project goals may have not been clearly identified with staff members because of the low profile approach used. Students in the experimental groups were not all kept together for the duration of the project. There were staff changes during the project. Was it possible to completely orient or brief new staff members in the Career Education concept and goals well into the second or third year of the project? Should the community have been invited to become a more active participant? And finally, was the testing instrument used to evaluate the project completely valid? Statistics do not tell all. Many things were not covered, or could not be covered, effectively in or with a testing device of this nature. Certainly, there is room for much more research in this area.

Conclusions

Positive outcomes of the Muskegon Comprehensive Career Education Research and Development Project, while not measured by the evaluation instrument, continue to emerge. Many things cannot be tested directly, as the Muskegon

Project demonstrates.

Students were provided with basic reasons for school by being shown the relationship between academic subjects and the real working world. Individual needs and individual programs were developed. This will, in itself, take years to evaluate.

When Career Education concepts were employed in the classrooms, teachers reported increased motivation by students to want to learn, and ability to see the need to learn. Teachers appreciated the fact, because of the nature of the project, that at last someone was truly interested in exactly what they were doing in the classroom. Career Education made the teacher feel important and needed. The creative ability of the teacher was called upon in the development of teaching aids.

For commercial and industrial employers, Career Education can provide more employees in the future who understand the value of work and the various requirements of the work setting. Industry and business should benefit in the future by having accepted more of a direct responsibility in the education of our youth. Career Education activities brought the community and public schools together in a very positive way. This bond will continue to grow stronger. Career Education has succeeded and will continue to succeed in the Muskegon area.

Recommendations for the Future

The cause for Career Education must continue for a variety of reasons. For a number of years, the general public has demanded that the formal educational system change in ways that will enable students, when they leave the educational system, to be more successful in finding and engaging in satisfying, worthwhile work. It is often said that the meaningfulness of work in the life-style of Americans is declining and this spells serious trouble for productivity. Needless to say, Americans will continue to issue this call to their schools to become more responsive to the needs of their youngsters.

It is now time to launch a complete attack upon our school curriculum. Call it revolution if you wish. It is now time to enlist all the forces in our community for Career Education. Business, industry, government, parents; everyone must become actively engaged in this great thrust.

Career Education will continue to grow and flourish in our schools if it is effectively implemented: (1) Career Education must become the philosophy of all educational activity...school and education must be looked upon as preparation for work; (2) Again, all facets of the community must be engaged...Career Education is and must be a massive "joint effort;" and (3) Initially, Career Education can grow only if sufficient funds are available. The one serious obstacle facing us is the lack of funding for in-service. There is truly no other one way to get Career Education off the ground other than massive in-service. After Career Education becomes a part of all school systems, in all grades, in all classes and at all levels, the emphasis upon Career Education can diminish considerably. It is now time to begin to enlarge upon initial efforts.

APPENDIX A

ELEMENTARY
LEVEL

OCCUPATIONAL DEVELOPMENT INVENTORY

Part I
Occupational Knowledge

(Interview Guide)

Prepared by the staff of the Evaluation and Testing Department

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Occupational Development Inventory — Elementary Level

Part I: Occupational Knowledge

DIRECTIONS

In administering the Occupational Knowledge portion of the Occupational Development Inventory, it is essential to first establish rapport with the student to encourage his cooperation and to successfully complete the interview. Establishing this rapport depends upon the judgment of the interviewer, taking into account the personality of the student and other relevant variables in the interview situation.

The room in which the interview will take place should be well lighted and quiet. It should contain a chair for the interviewer and one for the student, as well as a table large enough to spread out the interview materials (ten boxes and approximately eight cards).

When the student arrives for the interview, the interviewer should introduce himself and explain that the purpose of the interview is to find out how much each student knows about work. This information will be used to help students become better prepared for work in the future.

The student identifying information that appears at the top of the Record Sheet should be filled in next. Student responses to all sections should be recorded on the Record Sheet. A tape should also be made of the entire interview. The interviewer will not be responsible for scoring the interview, and at no time should he indicate if the student has made a correct or incorrect response.

Occupational Development Inventory — Elementary Level

Part I: Occupational Knowledge

Note: Directions typed in lower case are for the interviewer only and should not be read aloud. Directions typed all in capital letters are to be read aloud exactly as written, in a natural tone of voice.

When there are alternative directions to allow for different situations, these alternatives are marked with an asterisk (*). If the student is unable and/or too frustrated to complete any part of the interview, skip to the next part. (Note the instructions given in boxes.) Greatest care should be taken not to frustrate the student.

1. Reasons for Working

WHY DO PEOPLE WORK? CAN YOU GIVE ME SOME REASONS?

If the student gives only one reason, say:

CAN YOU GIVE ME MORE REASONS?

Record the student's response(s) on the Record Sheet.

2. Common Thread

a. *For Experimental Group students, begin with the following:

YOU ARE GOING TO LEARN IN YOUR SCHOOL THE DIFFERENT JOBS THAT PEOPLE DO.

*For Control Group students, begin with the following:

PEOPLE WORK AT MANY DIFFERENT JOBS.

For all students, continue with:

SOME OF THESE JOBS ARE ALIKE IN SOME WAY.
I AM GOING TO SHOW YOU HOW THE JOBS CAN BE GROUPED.
FOR EXAMPLE, THERE ARE SOME JOBS THAT CAN BE GROUPED AS HEALTH AND PERSONAL SERVICES.

Show the student the appropriate box and point to the words.

PEOPLE WITH THESE KINDS OF JOBS TAKE CARE OF THE LOOKS, HEALTH, FOOD, AND OTHER SERVICES FOR THE GOOD OF PEOPLE AND ANIMALS.

ANOTHER GROUP OF JOBS IS PROTECTIVE SERVICES.

Show the student the appropriate box and point to the words.

PEOPLE WITH THESE KINDS OF JOBS PROTECT PEOPLE AND WHAT THEY OWN.

THIS GROUP OF JOBS IS COMMUNICATIONS.

Show the student the appropriate box and point to the words.

PEOPLE WITH THESE KINDS OF JOBS TELL OR SHOW OTHER PEOPLE IDEAS OR THINGS THAT THEY WANT TO KNOW.

I WILL GIVE YOU SOME CARDS WITH THE NAMES OF JOBS ON THEM.

Read each of the following yellow cards and give it to the student.

(1) lawyer
(2) doctor
(3) school teacher
(4) actor
(5) baker
(6) policeman
(7) news reporter
(8) fireman

TRY THE BEST YOU CAN TO DECIDE WHICH GROUP EACH JOB BELONGS TO. THEN PUT THE CARD IN THE BOX OF THAT GROUP. FOR EXAMPLE, HERE IS THE CARD "FIREMAN." THIS CARD GOES IN THE BOX PROTECTIVE SERVICES BECAUSE FIREMEN PROTECT PEOPLE AND WHAT THEY OWN FROM FIRE.

Put the card "fireman" in the appropriate box.

DO YOU UNDERSTAND WHAT TO DO?

Make sure the student understands what he is to do. If the student seems unable to read some of the cards, read them to him again. Repeat the definitions of the groups if necessary.

> NOW YOU MAY BEGIN. REMEMBER, YOU CAN PUT MORE THAN ONE CARD IN EACH BOX.

If the student has difficulty completing the task, read the remaining cards to him one by one and ask him which box each card goes in. When the student is finished, collect the boxes and say:

> THAT'S VERY GOOD.

If, in Sections 2a, 2b, or 2c, the student is unable or refuses to classify two cards in a row, collect the boxes and cards. Then say:

> LET'S FORGET ABOUT THESE CARDS. WHAT KIND OF WORK WOULD YOU LIKE TO DO WHEN YOU GROW UP?

(After the entire interview is over, record the student's responses to Section 2 on the Record Sheet.)

Then turn to page 7, Section 3, Occupational Choice, and continue with the question:

> WHY WOULD THIS KIND OF WORK BE INTERESTING TO YOU?

b. NOW, I WILL SHOW YOU THREE MORE GROUPS OF JOBS.

> THIS GROUP OF JOBS IS BUILDING CONSTRUCTION AND MAINTENANCE.

Show the student the appropriate box and point to the words.

> PEOPLE WITH THESE KINDS OF JOBS BUILD AND TAKE CARE OF BUILDINGS.

> THIS GROUP OF JOBS IS MARINE INDUSTRY.

Show the student the appropriate box and point to the words.

> PEOPLE WITH THESE KINDS OF JOBS BUILD, RUN, AND TAKE CARE OF SHIPS AND BOATS.

THIS GROUP OF JOBS IS MECHANICS AND METAL WORKING.

Show the student the appropriate box and point to the words.

PEOPLE WITH THESE KINDS OF JOBS WORK WITH METALS AND PLASTICS. THEY ALSO USE AND REPAIR TOOLS AND MACHINES.

HERE ARE SOME CARDS WITH THE NAMES OF JOBS ON THEM.

Read each of the following white cards and give it to the student.

(9) worker in auto factory
(10) boat builder
(11) elevator operator
(12) machine operator
(13) sailor
(14) carpenter
(15) custodian

TRY THE BEST YOU CAN TO DECIDE WHICH GROUP EACH JOB BELONGS TO. THEN PUT THE CARD IN THE BOX OF THAT GROUP.

Make sure the student understands what he is to do. If the student seems unable to read some of the cards, read them to him again. Repeat the definitions of the groups if necessary.

NOW YOU MAY BEGIN.

If the student has difficulty completing the task, read the remaining cards to him one by one and ask him which box each card goes in. When the student has finished, collect the boxes and say:

THAT'S VERY GOOD.

c. NOW, I WILL SHOW YOU FOUR MORE GROUPS OF JOBS.

THIS GROUP OF JOBS IS BUSINESS AND COMMERCE.

Show the student the appropriate box and point to the words.

PEOPLE WITH THESE KINDS OF JOBS SELL AND DELIVER GOODS AND SERVICES, AND KEEP RECORDS.

THIS GROUP OF JOBS IS TEXTILES AND LEATHER.

Show the student the appropriate box and point to the words.

PEOPLE WITH THESE KINDS OF JOBS TAKE CARE OF AND MAKE THINGS FROM CLOTH, FUR, AND LEATHER.

THIS GROUP OF JOBS IS SPECIAL TECHNOLOGIES.

Show the student the appropriate box and point to the words.

PEOPLE WITH THESE KINDS OF JOBS MAKE USE OF SCIENCE, MATHEMATICS, OR MACHINES.

THIS GROUP OF JOBS IS EXTRACTIVE INDUSTRIES.

Show the student the appropriate box and point to the words.

PEOPLE WITH THESE KINDS OF JOBS STUDY OR USE THE NATURAL RESOURCES OF THE EARTH.
FOR EXAMPLE, A GARDENER GROWS PLANTS IN THE GROUND.

HERE ARE SOME MORE CARDS WITH THE NAMES OF JOBS ON THEM.

Read each of the following blue cards and give it to the student.

(16) dry cleaner
(17) radio repairman
(18) farmer
(19) newspaper boy
(20) shoemaker
(21) engineer
(22) coal miner
(23) gas station attendant

TRY THE BEST YOU CAN TO DECIDE WHICH GROUP EACH JOB BELONGS TO. THEN PUT THE CARD IN THE BOX OF THAT GROUP.

Make sure the student understands what he is to do. If the student seems unable to read some of the cards, read them to him again. Repeat the definitions of the groups if necessary.

NOW YOU MAY BEGIN.

If the student has difficulty completing the task, read the remaining cards to him one by one and ask him which box each card goes in. When the student has finished, collect the boxes and say:

THAT'S VERY GOOD.

After the entire interview is completed, record the student's responses to Section 2 on the Record Sheet, remove the cards from the boxes and put each group of cards in numerical order (1-8, 9-15, 16-23).

3. Occupational Choice

NOW WE WILL DO SOMETHING DIFFERENT.
HERE ARE ALL TEN GROUPS OF JOBS.

Show the student all ten boxes; read names of groups to the student.

WHICH OF THESE GROUPS OF JOBS DO YOU LIKE?

Record the student's response(s) on the Record Sheet. (If the student is unable to indicate a preference, write "None" on the Record Sheet.)

Then proceed to the directions below:

*If the student selects more than one cluster, then ask:

WHICH GROUP DO YOU LIKE BEST?

Record the student's response on the Record Sheet.

Collect the boxes. Then ask:

WHAT KIND OF WORK WOULD YOU LIKE TO DO WHEN YOU GROW UP?

Record the student's response on the Record Sheet. Then ask:

WHY WOULD THIS KIND OF WORK BE INTERESTING TO YOU?

Record the student's response(s) on the Record Sheet.

*If the student does not respond to this question, say:

A PERSON MIGHT CHOOSE TO BE A NURSE BECAUSE SHE IS INTERESTED IN HELPING PEOPLE.
WHY WOULD THE WORK OF A ________________________
(insert student's choice of occupation)
BE INTERESTING TO YOU?

Record the student's response(s) on the Record Sheet.

WHY DO YOU THINK YOU WOULD BE GOOD AT THIS KIND OF WORK?

Record the student's response(s) on the Record Sheet.

4. Educational Backgrounds

I AM GOING TO SHOW YOU SOME CARDS WITH NAMES OF JOBS ON THEM.

Read the green cards numbered 1 through 4, and put them on the table in front of the student.

(1) nurse
(2) waitress
(3) secretary
(4) doctor

FOR WHICH JOB WOULD A PERSON NEED TO GO TO SCHOOL THE LONGEST?

Record the student's response on the Record Sheet. Then say:

WHICH JOB WOULD NEED THE SHORTEST TIME IN SCHOOL?

Record the student's response on the Record Sheet and collect the cards in numerical order (1-4). Then say:

HERE ARE SOME MORE CARDS.

Read the green cards numbered 5 through 8, and put them on the table in front of the student.

(5) judge
(6) army officer
(7) newspaper boy
(8) stewardess

FOR WHICH JOB WOULD A PERSON NEED TO GO TO SCHOOL THE LONGEST?

Record the student's response on the Record Sheet. Then say:

WHICH JOB WOULD NEED THE SHORTEST TIME IN SCHOOL?

Record the student's response on the Record Sheet and collect the cards in numerical order (5-8). Then say:

HERE ARE SOME MORE CARDS.

Read the green cards numbered 9 through 12, and put them on the table in front of the student.

(9) garbage collector
(10) television repairman
(11) school principal
(12) barber

FOR WHICH JOB WOULD A PERSON NEED TO GO TO SCHOOL THE LONGEST?

Record the student's response on the Record Sheet. Then say:

WHICH JOB WOULD NEED THE SHORTEST TIME IN SCHOOL?

Record the student's response on the Record Sheet and collect the cards in numerical order (9-12).

5. Home Life and Life Style

a. Indoor - outdoor

SOME JOBS ARE USUALLY DONE OUTDOORS AND SOME JOBS ARE USUALLY DONE INDOORS. I AM GOING TO READ YOU SOME NAMES OF JOBS. PUT THE CARDS WITH OUTDOOR JOBS IN ONE ROW AND THE CARDS WITH INDOOR JOBS IN ANOTHER ROW.

Indicate where each row should be placed, then read the gray cards and give them to the student.

(1) typist
(2) farmer
(3) mailman
(4) sales clerk
(5) fisherman
(6) factory worker

Then ask:

DO YOU UNDERSTAND WHAT I WANT YOU TO DO?

Make sure the student understands his task. If he seems unable to read some of the cards, read them to him again.

NOW YOU MAY BEGIN.

After the student finishes, record his responses on the Record Sheet and collect the cards in numerical order (1-6). Then say:

THAT'S FINE.

b. Danger

SOME JOBS ARE MORE DANGEROUS THAN OTHERS. I AM GOING TO READ YOU SOME NAMES OF JOBS. PUT THE CARDS WITH JOBS THAT ARE DANGEROUS IN ONE ROW AND THE CARDS WITH JOBS THAT ARE NOT VERY DANGEROUS IN ANOTHER ROW.

Indicate where each row should be placed, then read the beige cards and give them to the student.

(1) fireman
(2) cook
(3) policeman
(4) artist
(5) coal miner
(6) janitor

Then ask:

DO YOU UNDERSTAND WHAT I WANT YOU TO DO?

Make sure the student understands his task. If he seems unable to read some of the cards, read them to him again.

NOW YOU MAY BEGIN.

After the student finishes, record his responses on the Record Sheet and collect the cards in numerical order (1-6). Then say:

THAT'S FINE.

c. Out-of-town

PEOPLE WHO WORK AT SOME JOBS SPEND A LOT OF TIME GOING TO OTHER CITIES; PEOPLE WHO WORK AT OTHER JOBS DO NOT HAVE TO TRAVEL SO OFTEN. I AM GOING TO READ YOU SOME NAMES OF JOBS. PUT THE JOBS THAT NEED A LOT OF TRAVELING IN ONE ROW AND THE JOBS THAT DO NOT NEED MUCH TRAVELING IN ANOTHER ROW.

Indicate where each row should be placed, then read the orange cards and give them to the student.

(1) librarian
(2) football player for Detroit Lions
(3) baker
(4) airline pilot
(5) clerk typist
(6) telephone operator

Then ask:

DO YOU UNDERSTAND WHAT I WANT YOU TO DO?

Make sure the student understands his task. If he seems unable to read some of the cards, read them to him again.

NOW YOU MAY BEGIN.

After the student finishes, record his responses on the Record Sheet and collect the cards in numerical order (1-6). Then say:

THAT'S FINE.

d. Work at night

PEOPLE WHO HAVE SOME JOBS OFTEN WORK AT NIGHT. OTHER PEOPLE USUALLY WORK DURING THE DAY. I AM GOING TO READ YOU SOME NAMES OF JOBS. PUT THE CARDS WITH NIGHT JOBS IN ONE ROW AND THE CARDS WITH DAY JOBS IN ANOTHER ROW.

Indicate where each row should be placed, then read the pink cards and give them to the student.

(1) factory watchman
(2) school bus driver
(3) house painter
(4) newspaper reporter
(5) milkman
(6) professional basketball player

Then ask:

DO YOU UNDERSTAND WHAT I WANT YOU TO DO?

Make sure the student understands his task. If he seems unable to read some of the cards, read them to him again.

NOW YOU MAY BEGIN.

After the student finishes, record his responses on the Record Sheet and collect the cards in numerical order (1-6). Then say:

THAT'S FINE.

6. Occupational Opportunities

*For students who live in Muskegon, say:

WHAT ARE SOME OF THE IMPORTANT BUSINESSES AND INDUSTRIES IN MUSKEGON?

*For students who do not live in Muskegon, use the name of the town they do live in to replace Muskegon in the question above.

APPENDIX B
RECORD SHEET
OCCUPATIONAL DEVELOPMENT INVENTORY — ELEMENTARY LEVEL
Part I: Occupational Knowledge

Student's Name____________________ Grade Level____________________

School District____________________ School Building____________________

Interviewer____________________ Date____________________

RECORD ANSWERS FOR ALL SECTIONS OF PART I ON THIS SHEET.

Section 1 — Reasons for Working

List the reason(s) for working the student gave.

1.
2.
3.
4.

Section 2 — Common Thread

The names of the ten clusters are below. Record the jobs (by their numbers) which the student assigned to each cluster.

Health & Personal Services	Protective Services	Communications

Building Construction & Maintenance	Marine Industry	Mechanics & Metal Working

Business & Commerce	Textiles & Leather	Special Technologies	Extractive Industries

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Section 3 — Occupational Choice

List the cluster(s) the student selected. If the student was unable to indicate a preference, write "none."

1. 2. 3.

Circle the one cluster the student liked best.

Write below the kind of work the student wants to do when he grows up.

List the reason(s) the student gave why this kind of work interests him.

1. 2. 3.

List the student's reason(s) why he would be good at this kind of work.

1. 2. 3.

Section 4 — Educational Backgrounds

For each numbered group of jobs, write the name of the job that the student selected as needing the longest time in school and the name of the job the student selected as needing the shortest time in school. (Use abbreviations if necessary.)

Card Numbers	Longest Time in School	Shortest Time in School
1-4		
5-8		
9-12		

Section 5 — Home Life and Life Style

Record the jobs from items 5a, 5b, 5c, and 5d as the student classified them. (Use abbreviations if necessary.)

a. Indoor	Outdoor	b. Dangerous	Not Dangerous
c. Out-of-Town	In-town	d. Work at Night	Work in Day

Section 6 — Occupational Opportunities

List the businesses and/or industries given by the student.

1.
2.
3.

IF YOU HAVE ANY COMMENTS REGARDING THIS STUDENT, MAKE THEM IN THE SPACE BELOW:

APPENDIX C

Scoring Procedures for Part I
Elementary Section
Occupational Development Inventory

In scoring Part I of the Elementary Section of the Occupational Development Inventory it is important to take into consideration the relative unsophistication of the learner. Students who were interviewed were from the fourth, fifth, and sixth grades. You should not consider the grammatical expertise of the students being interviewed nor the spelling accuracy of the interviewers. The interviewers attempted to measure the students' achievement of certain objectives, not the students' verbal ability.

Please write all of your scores for the sections of the interview described here on the scoring sheet provided. Make sure that the label on the scoring sheet corresponds to the student sheet you are scoring. Now you may begin to score Part I - Occupational Knowledge.

Section 1 - Reasons for working

This section attempts to gather information on two objectives. Students must identify personal needs which are met through work (e.g. material needs, needs for creativity, etc.), and students must identify the value of work in terms of societal goals (e.g. understand that work is necessary to produce and distribute goods and services people want).

Scoring: Score the student's response(s) in terms of his mentioning how work satisfies both personal needs and societal goals. Thus, this section will be scored as follows:

0 = not relevant or no response
1 = mentioned either a personal need or societal goal
2 = mentioned both personal need and a societal goal

A score of 2 does not necessitate two separate responses. If the judge feels a single response covers both personal needs and societal goals, then a score of 2 is justified. If there are two "personal needs" responses, it would still be a 1 rating.

Now turn to the second page of the interview Record Sheet.

Section 3 - Occupational choice

a) A judgement will be made as to whether or not the student's occupational choice matches or falls into his choisen cluster. The chosen cluster is listed in the box at the top of the page. If more than one cluster is listed, the circled or starred one is the chosen cluster. The student's occupational choice is listed in the second box. If there is no cluster listed or if several are listed but none are designated as the chosen cluster, do not score remainder of the interview. If no occupational choice is listed or if several are listed but none are designated (circled or starred) as the chosen occupation, then do not score the remainder of the interview, including Section 3. Score his occupational choice in the following manner:

0 = choice not in cluster
1 = choice in cluster

to assist the judge in making this decision, the booklet Ten-Cluster Classification of Occupations will be made available. This booklet has classified thousands of job names under the ten-cluster system. However, it is conceivable that the chosen occupation listed by the student will not be listed in the booklet. In this case, the judge will decide if the occupation is accurately described by the common thread of the chosen cluster.

b) A student's reason (s) for being interested in his chosen work can be found in the third box on the page. Reasons should be scored in terms of the level of conceptualization expressed in the responses. The following scoring scheme will be used in scoring this section:

0 = no reason, completely irrevelant response, doesn't know
1 = it's fun, it looks like fun, it makes you feel good, thinks it would be nice
2 = modeling someone else; i.e. a friend, an aunt, an uncle, a parent, a sibling, a hero figure
3 = pragmatic reasons; fulfilling basic needs (i.e. the need for food, clothing, shelter, physiological needs, social needs) of self and others
4 = fulfilling self (but on a higher level than basic needs); i.e. for good of man, self-actualization, strongly related to work values or interests of those in that field

If the student provides several responses that could receive different scores, the response(s) yielding the highest score should be used as his score for this section.

c) The student's reason(s) why he would be good at his chosen work are listed in the last box on the page. Responses will be scored in the following manner:

0 = no response, doesn't know why, answer not relevant
1 = likes it or general liking category
2 = vicarious experience
3 = direct experience on learning to do it

Again, the response yielding the highest score is the score for this section.

Section 6 - Occupational opportunities

The last section of the interview form is labeled Occupational Opportunities. This section seeks to test the student's knowledge of occupations that exist in his community. Score the student's responses in the following manner:

0 = no response, non-relevant response, occupation or business listed does not exist in the community
1,2,3, ... = as many businesses or industries listed by the student that exist in the community

Titles of occupations, such as "teacher," or "fireman" should be scores "0," however, a response such as "the Muskegon School System," or "the Muskegon Fire Department" should be allowed since these are namesof businesses and industries in the community.

APPENDIX D

Building Construction and Maintenance

1

This cluster includes all occupations which are involved in the physical construction of buildings or structures of any kind and the care of these structures once built– including fixtures.

Construction

- Apprentices N.E.C.
- Boilermakers
- Bricklayers, stonemasons, tilesetters, and apprentices
- Building inspectors
- Carpenters and apprentices
- Carpenter helpers
- Cement masons
- Chainmen, rodmen, axmen, surveying
- Contractors
- Electricians and apprentices
- Elevator constructors
- Engineers
  - Civil
  - Electrical
  - Highway
  - Mechanical
  - Railroad
- Estimators
- Floor layers--linoleum and carpet
- Glaziers
- Insulating workers
- Ironworkers
- Laborers
- Lathers
- Lead burners
- Marble, tile, and terrazzo workers
- Millwrights
- Operating engineers
- Operatives--non-manufacturing, construction
- Painters, construction and maintenance
- Paperhangers
- Pipe coverers
- Plasterers
- Plumbers, pipefitters and apprentices
- Riggers
- Roofers
- Sheetmetal workers and apprentices
- Stationary engineers
- Stationary firemen
- Stonecutters and stonecarvers
- Surveyors
- Technicians
  - Civil engineering
  - Construction
  - Highway Engineering

Custodial and Domestic Services

- Building managers and superintendents
- Charwomen and cleaners
- Custodians
- Elevator operators
- Helpers
- Housekeeper assistants
- Housekeepers, executive
- Housekeepers and stewards
- Housemen
- Janitors and sextons
- Maids
- Porters
- Public administration--operatives and laborers
- Service workers (except private household) N.E.C.
- Vermin exterminators

Furniture, Fixture, Woodworking

Furniture, Fixture, Woodworking

- Cabinet workers
- Inspectors, scalers, graders--log and lumber
- Laborers
  - Furniture and fixture
  - Saw mills, planing mills
- Lumbermen, raftsmen, wood choppers
- Operatives
  - Furniture and fixtures
  - Saw mills, planing mills, misc. wood products
- Sawyers
- Upholsterers

Business and Commerce

2

People employed in this group contact the public in promoting sales, distributing goods or services, keeping accounts, and making reports.

Distribution

- Advertising managers
- Agents and brokers N.E.C.
- Attendants, auto service and parking
- Auctioneers
- Bellhops
- Bellmen and bell captains
- Buyers and department heads
- Buyers and shippers, farm products
- Cashiers
- Claim adjusters
- Credit managers, interviewers, collectors
- Compensation advisors
- Customer service managers
- Decorators, window dressers
- Demonstrators
- Department store managers
- Dispatchers and starters, vehicles
- Economists
- Floor managers
- Grocery clerks
- Home service representatives
- Hotel floor supervisors
- Hotel managers and assistants
- Insurance adjusters, examiners, and investigators
- Interviewers (housing)
- Investment analysts
- Laborers, wholesale and retail trade
- Life insurance agents and brokers
- Market researchers
- Mail carriers
- Meter readers
- Newsboys
- Operatives--non-manufacturing, wholesale, and retail trade
- Order services correspondents
- Purchasing agents
- Railroad conductors
- Real estate agents and brokers
- Receptionists
- Research interviewers
- Reservations agents
- Route supervisors
- Sales agents
- Sales engineers
- Sales executives
- Sales representatives
- Salesmen and saleswomen
  - Advertising
  - Apparel
  - Chemical
  - Delivery
  - Drivers and routemen
  - Driver, salesmen
  - Encyclopedia
  - Food
  - Fur
  - Hucksters and peddlers
  - Life insurance
  - Manufacturers
  - Miscellaneous industries
  - Paper
  - Printing
  - Property and casualty insurance
  - Retail trade
  - Security
  - Stocks and bonds
  - Technical
  - Ticket
  - Time
  - Utility
  - Wholesale trade
- Shipping and receiving clerks
- Station agents
- Stewardesses
- Stock clerks and storekeepers
- Tellers
- Ticket agents
- Traffic agents and clerks
- Traffic managers
- Training specialists
- Warehousemen

Foremen

- Communications, utilities, sanitary services
- Construction
- Durable goods (Mfg.) N.E.C.
- Industrial N.E.C.
- Machinery (Mfg.)
- Metal industries (Mfg.)
- Non-durable goods (Mfg.) N.E.C.
- Railroads and railway express services
- Transportation, equipment N.E.C.
- Transportation, except railroad
- Textiles and textile products and apparel

Management--Salaried

- All other industries
- Apparel and accessories stores
- Auto repair and service garages
- Banking and other finance
- Business services
- Chamber of Commerce executives
- Communications and utilities and sanitary services
- Construction
- Eating and drinking places
- Food and dairy products stores
- Furniture, house furnishings and equipment
- General merchandise and limited price variety stores
- Hardware and farm equipment and building material, retail
- Insurance and real estate
- Managers, gasoline service station
- Manufacturing
- Miscellaneous repair services
- Motor vehicle and accessories, retail
- Officials--lodge, society, union, etc.
- Other retail trades
- Personal services
- Postmasters
- Public officials and administrators, etc. N.E.C.
- Transportation
- Wholesale trade

Management--Self-Employed

- All other industries
- Apparel and accessories stores
- Auto repair service and garages
- Banking and finances
- Business services
- Communications and utilities and sanitary services
- Construction
- Eating and drinking places
- Food and dairy products stores
- Furniture, house furnishings and equipment
- Gasoline service stations
- General merchandise and limited price variety stores
- Hardware and farm equipment and building material, retail
- Insurance and real estate
- Manufacturing
- Miscellaneous repair services
- Motor vehicle and accessories, retail
- Other retail trades
- Personal services
- Transportation
- Wholesale trades

Office Work

- Accountants and auditors
- Administrative assistants
- Administrative services director
- Bank messengers
- Bookkeepers
- Check encoders
- Check inscribers
- Clerical and kindred workers N.E.C.
- Clerk typists
- Clerks
    - Accounting
    - Auditing
    - Billing
    - Bookkeeping
    - Checkout
    - Control
    - Cost
    - Civil aviation
    - Distribution
    - Filing
    - General office
    - Information
    - Insurance
    - Mail
    - Mortgage
    - Plant maintenance
    - Post office
    - Receiving
    - Reservation
    - Shipping
    - Statistical
    - Transfer
    - Transit
- Computer operators
    - Collator
    - Computer programmers
    - Computer tape librarians
    - Console
    - Converter
    - Keypunch
    - Peripheral equipment
    - Reader-sorter
    - Sorting machines
    - Tabulating machines
- Court reporters
- Data processing workers
- Finance experts
- Home office underwriters
- Industrial engineers
- Industrial relations directors
- Insurance checkers
- Inventory librarians
- Librarians
- Library assistants
- Manager/Administrators
- Messengers
- Office machine operators
- Office managers
- Office workers N.E.C.

Office Work (Continued)

- Operators
  - Adding machine
  - Addressing machine
  - Auto. writing machine
  - Billing machine
  - Bookkeeping machine
  - Calculating machine
  - Comptometer
  - Duplicating machine
  - Proof machine
  - Stenotype machine
  - Switchboard
  - Transcribing machine
- Operations managers
- Payroll clerks
- Personnel workers
  - Assistants
  - Managers
  - Recruiters
  - Employment representatives
  - Manpower advisors
  - Compensation advisors
  - Employee benefit approvers
  - Compensation and benefit directors
- Policy writers
- Postal clerks
- Production planners, expediters, managers
- Railroad clerks
- Railroad mail clerks
- Salary and wage administrators
- Secretaries
- Statisticians and actuaries (mathematicians)
- Stenographers
- Systems analysts
- Teletypers
- Timekeepers
- Time study analysts
- Tool crib attendants
- Typists

Transportation

- Aircraft pilots and navigators
- Baggagemen
- Bus drivers
- Cab drivers, chauffeurs
- Fork lift operators
- Inter-city bus drivers
- Laborers
  - Teamsters
  - Truck drivers' helpers
- Line haul truck drivers
- Local transit bus drivers
- Local truck drivers.
- Motormen—mine, factory, logging camp, etc.
- Over-the-road truck drivers
- Plant truck operators
- Railroad conductors
- School bus drivers
- Streetcar motormen
- Truck and tractor drivers

Communications

3

People engaged in communications occupations have "transmission of ideas and information" as a common bond. The cluster includes all occupations that major in written, spoken, or graphic presentation of ideas and information.

Education and Services N.E.C.

- Administrators, educational
- Anthropologists
- Clergymen
- College presidents
- Counselors
- Farm advisors
- Foreign service officers
- Guidance directors
- Home economists
- Home management advisors
- Instructors
- Interpreters, foreign languages
- Librarians
- Political scientists
- Politicians
- Principals
- Professors
- Psychologists
- Religious workers
- School superintendents
- Sociologists
- Teachers N.E.C.
- Teachers, elementary
- Teachers, secondary

Graphic Arts

- Architects
- Artists
  - Advertising layout
  - Commercial
  - Decorators
  - Fashion designers
  - Illustrators
  - Interior designers and decorators
  - Letterers
  - Lithographers
  - Scenic designers
  - Sign painters
  - Sign writers
  - Stylists
- Artists and art teachers
- Bookbinders and bindery workers
- Designers
- Draftsmen
  - Architectural
  - Cartographers
  - Design draftsmen
  - Detailers
  - Engineering aides
  - Highway
  - Machine designers
  - Mechanical
  - Model makers
  - Technical illustrators
  - Tool designers
  - Tracers
- Electrotypers and stereotypers
- Embossing machine operators
- Engravers (other than photoengravers)
- Engravers, steel and copperplate
- Laborers--printing, publishing and allied industries
- Lithographers
- Mailers
- Operatives
  - Printing, publishing, allied industries (except newspaper) N.E.C.
- Newspaper publishing and printing N.E.C.
- Photoengravers and lithographers
  - Cameramen
  - Etchers
  - Finishers
  - Plate makers
  - Routers
  - Strippers
- Photographers and photo process workers
  - Commercial
  - Industrial
  - Portrait
  - Press
  - Television
- Printers
  - Apprentices
  - Operators
    - Linotype
    - Ludlow
    - Monotype
    - Phototype
  - Proofreaders
  - Provers
  - Stonemen
  - Printing pressmen and assistants
    - Apprentices
    - Cylinder
    - Gravure
    - Letterpress
    - Lithograph
    - Platen and job
    - Plate press
    - Pressfeeders
    - Web

Performing Arts

- Actors
- Actresses
- Announcers
- Ballet dancers
- Choreographers
- Dancers and dancing teachers
- Disc jockeys
- Entertainers N.E.C.
- Floor or stage managers
- Makeup artists
- Models, fashion
- Musical directors
- Musicians and music teachers
- Newscasters
- News directors
- Singers
- Singing teachers

Transmission

- Aircraft ground radio operators and teletypists
- Airline dispatchers
- Air traffic controllers
- Announcers, radio/television
- Assistants, program
- Cameramen
- Directors
  - Associate
  - Continuity
  - Education and public affairs
  - Program
  - Technical
- Dispatch clerks
- Editors, film
- Engineers
  - Assistant chief engineers, development
  - Chief engineers
- Inspectors
- Laborers--communications, utilities
- Librarians
  - Film
  - Music
- Managers, station
- Motion picture projectionists
- Operatives--communications, utilities, sanitary services
- Producers
- Radio operators
- Studio supervisors
- Technicians
  - Audio-control
  - Broadcast
  - Communications
  - Control room
  - Electronics
  - Field
  - Lighting
  - Maintenance
  - Radar
  - Recording
  - Sound effects
  - Supervisory
  - Transmitter
  - Video-control
  - Video-tape recording
- Telegraph operators
- Telephone operators
- Train dispatchers
- Training specialists
- Wire chiefs, railroad

Writing

- Authors N.E.C.
- Continuity writers
- Columnists
- Copywriters, advertising
- Critics
- Editorial writers
- Editors
  - Book
  - Broadcast
  - Magazine
  - Newspaper
  - Picture
  - Trade/Technical publication
- Essayists
- Gag writers
- Historians
- Humorists
- Job analysts
- Literary writers
- Philosophers
- Playwrights
- Poets and lyric writers
- Public relations men
- Reporters
  - Analysts
  - Correspondents
  - Feature
  - Market
  - News
  - Sports
  - Technical
- Researchers
- Rewrite men
- Scenario writers
- Syndicated-feature writers
- Technical writers
- Textbook writers
- Translators

Extractive Industries

4

The common denominator for these occupations is the production and/or conversion of natural resources found in the earth or produced therefrom.

Agriculture

- Agronomists
- Animal husbandmen
- Extension agents
- Farm advisors, managers, owners, and tenants
- Floral designers
- Greenhouse workers
- Laborers
  - Farm wage workers
  - Gardeners (except farm and grounds keepers)
  - Farm, unpaid family
- Landscape gardeners
- Natural scientists
  - Agriculture
  - Chemical
- Nurserymen
- Swine herdsmen

Natural Science

- Astronomers
- Biologists
- Botanists
- Chemists
- Geographers
- Geologists
- Geophysicists
- Meteorologists
- Oceanographers
- Physicists

Petroleum and Mines

- Engineers, technical chemical
- Engineers, technical mining
- Laborers
  - Coal mining
  - Crude petroleum and natural gas extraction
  - Mining and quarrying (except fuel)
  - Miscellaneous petroleum and coal products
  - Petroleum refining
  - Laboratory technicians
- Operatives
  - Miscellaneous petroleum and refining
  - Petroleum refining

Pulp, Paper, and Paper Products

- Backtenders
- Beater engineers
- Chemical analysts
- Chippermen
- Corrugator operators
- Diemakers
- Digester operators
- Envelope machine operators
- Laborers, paper and allied products
- Operatives
  - Miscellaneous paper and pulp products
  - Pulp, paper, paperboard mills
  - Paperboard containers and boxes
- Paper inspectors
- Paper machine sorters
- Paper sorters and counters
- Paper testers
- Printer, slotter operators
- Supercalendar operators

Health and Personal Services

5

Care and improvement of personal appearance, health, nutrition, and concern for the general well-being of people (or animals) characterize occupations in this cluster.

Food Services

- **Bakers**
- **Bakers, production**
    - **Bench hands**
    - **Checkers**
    - **Dividermen**
    - **Dough molders**
    - **Hand icers**
    - **Helpers**
    - **Icing mixers**
    - **Machine icers**
    - **Mixers**
    - **Molding machine operators**
    - **Ovenmen**
    - **Packers**
    - **Slicing and wrapping machine operators**
- **Bartenders**
- **Boarding and lodging housekeepers**
- **Bus boys and girls**
- **Butchers**
- **Cake decorators**
- **Confectionery-candy makers**
- **Cooks-chefs**
- **Counter attendants**
- **Dietitians**
- **Dishwashers**
- **Food checkers**
- **Food chemists**
- **Food managers**
- **Fountain men**
- **Kitchen workers N.E.C. (except private household)**
- **Laborers**
    - **Bakery products**
    - **Beverage industries**
    - **Canning and food preservation**
    - **Confectionery and related products**
    - **Dairy products**
    - **Grain mill products**
    - **Meat products**
    - **Miscellaneous food preparation and kindred products**
- **Meatcutters (except slaughter and packing house)**
- **Mess boys**
- **Millers—grain, flour, feed**
- **Nutritionists**
- **Operatives**
    - **Bakery products**
    - **Beverage industries**
    - **Canning and preserving**
    - **Dairy products processing**
    - **Food preparation, misc.**
    - **Grain mill products**
    - **Meat products**
- **Slaughtering occupations**
- **Stewards**
- **Supervisors**
- **Waiters and Waitresses**
    - **Captains**
    - **Hostesses**
    - **Headwaiters**
    - **Headwaitresses**

Health Care

- **Attendants—hospital and other institutions**
- **Attendants—physicians' and dentists' offices**
- **Chiropractors**
- **Dentists**
- **Health and welfare coordinators**
- **Licensed practical nurses**
- **Midwives**
- **Nurses aides**
- **Nurses, student professional**
- **Occupational therapy assistants**
- **Office nurses**
- **Optometrists**
- **Orderlies**
- **Osteopaths**
- **Pathologists**
- **Pharmacologists**
- **Physicians and surgeons**
- **Physiologists**
- **Physical therapy assistants**
- **Podiatrists**
- **Psychiatrists**
- **Registered Nurses**
- **Rehabilitation counselors**
- **Therapists and healers**
- **Veterinarians**

Laboratory Services

- Bacteriologists
- Biochemists
- Biological technicians
- Biophysicists
- Electro-cardiograph technicians
- Entomologists
- Medical and dental technicians
- Medical record librarians
- Medical x-ray technicians
- Sewage and water treatment plant workers
- Zoologists

Recreation and Sports

- Attendants, recreation and amusement
- Athletes
- Recreation and group workers
- Sports instructors and officials

Personal Services

- Attendants—professional and personal services N.E.C.
- Babysitters, private household
- Barbers
- Beauticians, beauty operators, hairdressers
- Bootblacks
- Dorm directors
- Funeral directors
- Housewives
- Housekeepers
- Houseparents
- Masseurs
- Other personal services, laborers
- Personal services, operatives
- Private household workers N.E.C.
- Social and welfare workers

Marine Industry

6

These people engage in the construction, operation, and maintenance of ships and boats of all sizes.

Construction and Maintenance

- Boatbuilders, wood
- Boat riggers
- Laborers, shipyard
- Marine engineers
- Shipfitters
- Shipfitter apprentices
- Shipfitter foremen
- Shipwrights and apprentices

Operations

- Boatmen, canalmen, lock keepers
- Boatswains
- Deck-engine operators
- Deck officers
- Engineers
- Longshoremen
- Pilots
- Sailors and deckhands
- Seamen--able seamen
- Ship electricians
- Ship officers, pilots, pursers and engineers

Fishing

- Fish culturists
- Fish farmers
- Fishermen
- Fishery bacteriologists

Mechanics and Metal Working

7

This includes occupations concerned with mechanical service and repair, machining, fabrication and finishing processes in manufacturing, foundry, forging, and molding operations, and plastics production and fabrication. The common thread that ties these occupations together is use of metals and plastics of all kinds, sizes, types, alloys, and finishes, and the hand and power tools used.

Machining

- Craftsmen and kindred workers N.E.C.
- Jig-fixture builders
- Machinists and apprentices
  - All-around
  - Experimental
  - Maintenance
- Operators
  - Automatic screw machine
  - Boring machine
  - Drill press
  - Engine lathe
  - Grinding lathe
  - Machine tenders
  - Milling machine
  - Turret lathe
- Opticians, lens grinders and polishers
- Roll turners
- Set-up men
- Sharpeners and tool dressers
- Tool and diemakers and setters

Manufacturing--Fabrication and Finishings

- Anodizers
- Assemblers and installers
- Boilermakers, fitup and layout men
- Buffers
- Coil winders
- Crystal finishers
- Electroplaters
- Filers, grinders, polishers--metals
- Galvanizers
- Glass blowers
- Hydrogen furnace firers
- Infra-red oven operators
- Laborers, all other industried included N.E.C.
- Laborers
  - Cement, concrete, gypsum, and plaster products
  - Electrical machinery equipment and supplies
  - Fabricated metal--industries
  - Glass and glass products
  - Machinery (except electrical)
  - Manufacturing (not specified)
  - Manufacturing--motor vehicles and motor vehicle equipment
  - Manufacturing--railroad and misc. transportation equipment
  - Miscellaneous--manufacturing industries
  - Miscellaneous--non-metallic mineral and stone products
  - Rubber and misc. plastic products
  - Structural clay products
- Layout men
- Machine and tooling fabrication workers
- Master millmen
- Metal finishers
- Metal processers
- Operatives
  - Aircraft and parts--manufacturing
  - Blanking machine
  - Electrical machinery equipment and supplies N.E.C.
  - Fabricated metal industries
  - Glass and glass products
  - Gypsum, cement, concrete and plaster manufacturing
  - Machinery (except electrical) N.E.C.
  - Manufacturing--motor vehicles and equipment
  - Manufacturing--railroad and misc. transportation equipment
  - Miscellaneous--manufacturing industries
  - Miscellaneous--non-metallic mineral and stone products
  - Miscellaneous--plastic products
  - Power brake
  - Power hammer
  - Power shear
  - Punch press
  - Rubber products
  - Stamping machine
  - Stretch press
  - Structural clay products
  - Packers, wrappers N.E.C.
  - Painters (except construction and maintenance)
  - Platers
  - Product finishers
  - Production line solderers
  - Quality control technicians
  - Riggers
  - Riveters
  - Scalers
  - Sheetmetal workers
  - Spool machine operators
  - Sprayers

Manufacturing--Fabrication and Finishings (Continued)

- Testers and inspectors
  - Analyzers
  - Assembly
  - Civil
  - Component
  - Electronic assembly inspectors
  - Engine mechanics
  - Fabrication
  - Final tester
  - Machined parts
  - Magnetic component
  - Operational tester
  - Outside production
  - Receiving
  - Testing machine operators
  - Transformer
  - Tuner testers
- Timers
- Tire builders
- Trouble shooters
- Welders and cutters
  - Arc and arc cutter
  - Gas and oxygen cutters
  - Inert gas
  - Profile cutting torch operators
  - Resistance

Manufacturing--Foundry, Forge and Primary Metals

- Assorters
- Automatic rolling mill attendants
- Blacksmiths
- Blasters and powdermen
- Blowers
- Charging machine operators
- Checkers, examiners, inspectors (Mfg.)
- Chippers
- Cindermen
- Coremakers--bench, floor, hand, machine
- Coreoven tenders
- Cranemen, derrickmen, hoistmen
- Cupola tenders
- Diesinkers
- Equipment operators
- Forgemen and hammermen
- Forging press operators
- Graders and sorters
- Grinders
- Heaters
- Heat treaters, annealers, temperers
- Helpers
- Hotmetal cranemen
- Ingot strippers
  - Cranemen
  - Heater
  - Soaking pit
- Inspectors--other industries
- Keepers
- Laborers
  - Blast furnace, steel works, finishing mills
  - Other primary iron and steel industries
  - Non-ferrous
- Ladle cranemen
- Loaders
- Manipulator operators
- Melters
- Metallurgical assistants
- Molders--bench, hand, helper, machine
- Molders, metal
- Oilers and greasers
- Operatives
  - Blast furnace, steel works, rolling mills, and finishing mills
  - Other primary iron and steel industries
  - Non-ferrous
- Patternmakers and model makers
- Picklers
- Piercer machine operators
- Pourers--furnace, smelters, pourers
- Press smiths
- Rollers and roll hands
- Sand blasters
- Sand mixers
- Shakeout men
- Shearmen
- Skipmen
- Stripper cranemen
- Stockhouse tenders
- Testers
- Testing technicians
- Trimmers
- Tumbler operators
- Up-setter men
- Wire drawers

Mechanics--Repair and Service

- Aeronautical technicians
- Airconditioning and refrigeration mechanics
- Aircraft mechanics
- Aircraft test engineers
- Airframe and power plant mechanics
- Appliance service mechanics
- Auto mechanics
- Auto upholsters and trimmers
- Aviation line maintenance mechanics
- Body and fender mechanics
- Business and office machine repairmen
  - Accounting and bookkeeping machines
  - Adding machines
  - Calculating machines
  - Cash registers
  - Copying machines
  - Data processing machines
  - Dictating machines
  - Duplicating and copying machines
  - Postal and mailing equipment
  - Typewriters
- Clock and watch repairmen
- Coal equipment operators
- Compressor house operators
- Diesel mechanics
- Electric motor repairmen
- Electro-mechanical servicemen
- Elevator mechanics
- Food and beverage dispensing machine repairmen
- Gas appliance servicemen
- Hydraulic mechanics
- Industrial machinery repairmen
- Inspector N.E.C.
- Jewelry repair, jewelers and watchmakers
- Laborers
  - Garage, car washers, greasers
  - Professional and photographic equipment and watches
  - Railroad and railway express service
  - Transportation, except railroad
- Locomotive engineers
- Mechanic apprentices (misc.)
- Mechanics and repairmen N.E.C.
- Oil burner servicemen
- Operatives
  - Farm machinery and equipment
  - Non-manufacturing business and repair service
  - Railroad and railway express service
  - Transportation, except railroad
- Piano and organ tuners and repairmen
- Professional equipment, photo and watch equipment repair
- Railroad--car men, car shop mechanics, brakemen, firemen, flagmen and switchmen
- Research mechanics
- Scale repairmen
- Service station mechanic attendant
- Skilled tradesmen N.E.C.
- Truck mechanics
- Utility men

Protective Services

8

All persons in this cluster are concerned primarily with the protection of people and property.

Conservation

- Ecologists
- Environmental health engineers
- Fish and Game wardens
- Foresters
- Soil conservationists
- Soil scientists

Fire Protection

- Fire inspectors, lookouts, protection engineers
- Firemen
- Officers (Chief, Captain, Lieutenant)

Government Services

- FBI agents
- Government officials
- Inspectors
  - Customs
  - Food and drug
  - Public Administration
  - Railway express service
- Military servicemen

Law

- Bailiffs
- Judges
- Lawyers
- Legislators

Plant Safety

- Inspectors, transportation (except railroad, communications and other public utilities)
- Safety engineers, inspectors, technicians
- Ushers--recreation and amusement
- Watchmen
- Watchmen (crossing and bridge tenderers)

Police Protection

- Ballistics technicians
- Guards
- Marshalls and constables
- Matrons (policewomen)
- Policemen and detectives
- Sheriffs

Special Technologies

9

Technical occupations included in Special Technologies combine such learnings as applied science, mathematics, design, mechanics, and instrumentation. The universe of technology affects every phase of life. It offers, for example, opportunities for occupational development in electronic, chemical, mechanical, atomic energy, and metallurgical fields.

Atomic Energy

- Accelerator operator
- Decontamination men
- Designers
- Machine loaders
- Monitors, atomic energy
- Nuclear reactor operators
- Radiation monitors
- Radiographers
- Radio-isotope production operators
- Research and development assistants
- Science aides
- Technicians
  - Hot cells
  - Reactors
  - Science
- Uranium miners and drillers
- Waste disposal men
- Waste treatment operators

Chemical

- Chemists
- Chemical process operators
- Engineers, chemical
- Laboratory assistants
- Laborers--miscellaneous chemical and allied products
- Operatives
  - Chemical and allied products
  - Drugs and medicines
  - Paints, varnishes, related products
- Technicians
  - Chemical
  - Laboratory

Electronic and Electrical

- Cable splicers
- Electrical appliance service
- Electrical engineering aide
- Electrical motor repairmen
- Electronic checkout men
- Electronic repairmen
- Engineers--technical electrical
- Engineers, electronic
- Linemen, servicemen, telegraph, telephone and power
- Load checkers
- Meter installers
- Meter testers
- Neon sign servicemen
- Power plant workers
  - Auxiliary equipment operators
  - Switchboard operators
  - Turbine operators
  - Watch engineers
- Radio and television servicemen
- Radio mechanics
- Radio operators
- Research electricians
- Signal maintainers, railroad
- Substation operators
- Switchmen
- Testboard men
- Technicians
  - Electronic and electrical
  - Instrument
  - Radar
- Technicians, telephone
  - Equipment installers
  - Frame men
  - PBX installers
  - Repairmen
  - Station installers

Mechanical

- Engineers, mechanical
- Instrument makers
- Instrument repairmen
- Opitcal laboratory mechanics
- Technicians
  - Engineering and physical science
  - Instrument
  - Mechanical

Metallurgical

- Engineers, metallurgical
- Metallurgists
- Technicians, metallurgical

Textiles and Leather

10

Occupations in this group are concerned with design, production, and care of articles made from various fabrics, fur, leather, and findings.

Clothing and Accessories

- Cutting room workers
  - Assemblers (bundlers)
  - Cutters
  - Hand spreaders
  - Markers
- Designers
- Dressmakers and seamstresses
- Embroiderers
- Glove makers
- Hat and cap makers
- Milliners
- Patternmakers
- Pattern graders
- Sewing room workers
  - Checkers
  - Cleaners
  - Hand sewers
  - Sample stitchers
  - Sewing machine operators
  - Thread trimmers
  - Work distributors
- Tailoring workers
  - Alterations (bushelmen)
  - Apprentices
  - Dressmakers
  - Re-weavers
  - Tailors

Cleaning (and Laundry)

- All-around pressers
- Assemblers
- Blockers
- Classifiers
- Cleaners and pressers
- Darning machine operator
- Dry cleaning machine operators
- Dry cleaners, rug
- Dyers
- Feather renovators
- Finishers, hand
- Fur cleaners
- Furniture cleaners
- Glove former
- Launderette attendants
- Laundresses (private household)
- Leather cleaners
- Markers
- Press operators
- Silk finisher
- Spotter
- Tumbler operator
- Washers, machine

Fur Goods

- Designers
- Fur farmers
- Fur shop
  - Blenders
  - Blowers
  - Cutters
  - Dressers
  - Finishers
  - Furriers
  - Glazers
  - Graders
  - Ironers
  - Nailers
  - Pressers
  - Sewers
- Machine operators

Leather Work

- Belt makers
- Bootblacks
- Bootmakers, hand
- Fancy sewers
- Handbag makers
- Harness makers
- Laborers
  - Leather and leather products
  - Leather manufacturing
- Leather workers
  - Coaters
  - Cobblers
  - Cutters
  - Dressers
  - Etchers
  - Finishers
  - Graders
  - Stampers
  - Toolers
  - Turners
- Limb finishers
- Luggage makers
- Machine operators
- Saddle makers
- Shoe dyers
- Shoe layout men
- Shoemakers
  - Custom
  - Repairmen

Textile Production

- Knitters, loopers, toppers
- Laborers
  - Apparel and other fabric textile production
  - Textile and mill products
- Loom changers, fixers, setters, tenders
- Operatives
  - Knitting mills
  - Yarn, thread, fabric mills
- Spinners
- Weavers

APPENDIX E

SCORE SHEET — OCCUPATIONAL DEVELOPMENT INVENTORY — ELEMENTARY LEVEL

Part I: Occupational Knowledge

Date ____________________

Name of Rater

____

Level

____

Class Identification

____

Student Identification	Section 1 Reasons for Working	Section 3 Choice in Cluster	Section 3 Reasons for Interest	Section 3 Reasons Why Able to do Work	Section 6 Occupational Opportunities

APPENDIX F
ELEMENTARY
LEVEL

OCCUPATIONAL DEVELOPMENT INVENTORY

Part II
Occupational Vocabulary

NAME LAST FIRST MIDDLE ☐ BOY ☐ GIRL

TEACHER

SCHOOL DISTRICT

GRADE DATE

Prepared by the staff of the Evaluation and Testing Department

Wai-Ching Ho **William McCook**
Susan Detienne **Pamela Kuzma**

Consultants: Dr. John B. Carroll; Dr. J. Thomas Hastings; Mr. Louis A. McElroy; Dr. Donald E. Super; Dr. Ralph W. Tyler; Dr. Bert W. Westbrook

EDUCATIONAL RESEARCH COUNCIL
OF AMERICA
CLEVELAND, OHIO

April, 1973

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Occupational Development Inventory — Elementary Level
Part II: Occupational Vocabulary

Directions:

Read each problem.
Choose the best answer to fill in the blank.
Circle the letter beside the answer you choose.
Do not write in the blank.

Sample:

Another word for labor is______.

a. play
[✓ b.] work
c. rest
d. dream

1. Goods are made in a______.

a. library
b. hospital
c. factory
d. bank

2. A TV repairman is a______worker.

a. semi-skilled
b. clerical
c. unskilled
d. skilled

3 Mr. Jones does not have a job. He is______.

a. unemployed
b. hired
c. employed
d. advanced

4. Miss Sand works from 9 a.m. to 5 p.m. This is a schedule of her______.

a. working hours
b. hourly rates
c. vacation time
d. sick leave

5. Mr. Sparks was a fireman, but now he is the fire chief. Mr. Sparks was______.

a. fired
b. retired
c. promoted
d. laid off

6. Mr. Smith is hired by a telephone company. He is______of the company.

a. an employer
b. a customer
c. an owner
d. an employee

7. An organization formed by workers to protect their rights is a______.

a. business
b. company
c. college
d. union

8. If a plant does not have enough workers, it has a______of workers.

   a. supply
   b. team
   c. shortage
   d. surplus

9. A plan for a person to spend and save certain amounts of his income is a______.

   a. tax
   b. bill
   c. budget
   d. sale

10. Work that is done by hand is______.

   a. manual work
   b. machine work
   c. legal work
   d. mental work

11. Another word for wage is______.

   a. equipment
   b. pay
   c. expense
   d. premium

12. Mr. West is an airline pilot. Flying is his______.

   a. hobby
   b. occupation
   c. vacation
   d. product

13. Farmlands are found mostly in ______areas.

   a. rural
   b. metropolitan
   c. urban
   d. suburban

14. By law, the lowest salary a company may pay a worker is the ______.

   a. minimum wage
   b. maximum wage
   c. debt
   d. interest

15. The money you pay for food, clothing, and other necessary things is called_______.

   a. the cost of living
   b. a duty
   c. a pension
   d. the income tax

APPENDIX G
OCCUPATIONAL DEVELOPMENT INVENTORY

Elementary Level

Part II: Occupational Vocabulary

DIRECTIONS FOR ADMINISTERING

Prepared by the staff of the Evaluation and Testing Department

Wai-Ching Ho
Susan Detienne
William McCook
Pamela Kuzma

Educational Research Council of America
April, 1973

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Occupational Development Inventory (ODI) — Elementary Level
Part II: Occupational Vocabulary

General Directions

Directions which appear in capitals are to be read aloud by the teacher. Directions in lower case are for the teacher only.

Directions for Administering ODI — Part II

I AM GOING TO GIVE YOU A BOOKLET. DO NOT OPEN IT OR WRITE ON IT UNTIL I TELL YOU TO.

Give each student a booklet.

PRINT YOUR NAME ON THE LINE NEXT TO THE WORD "NAME."

Give directions for filling in other identifying information in the box on the cover.

NOW TURN TO THE FIRST PAGE. READ THE DIRECTIONS TO YOURSELF AS I READ THEM ALOUD.

"READ EACH PROBLEM. CHOOSE THE BEST ANSWER TO FILL IN THE BLANK. CIRCLE THE LETTER BESIDE THE ANSWER YOU CHOOSE. DO NOT WRITE IN THE BLANK."

NOW LOOK AT THE SAMPLE PROBLEM.

Read the sample problem and the four possible answers aloud.

THE ANSWER IS "WORK," SO A CIRCLE IS DRAWN AROUND THE LETTER BESIDE THE WORD "WORK."

Demonstrate the marking system on the chalk board.

ARE THERE ANY QUESTIONS?

Discuss any questions the students may have, making sure each student understands the marking procedure.

NOW, LET US BEGIN.

Read each problem and the possible answers to the students. Pause to allow time for them to mark the answers.

When page 2 is completed, say:

CLOSE YOUR BOOKLET.

Collect the booklets immediately.

APPENDIX H

ELEMENTARY
LEVEL

OCCUPATIONAL DEVELOPMENT INVENTORY

Part III
Occupational Interest, Attitude, and Value

NAME LAST FIRST MIDDLE ☐ BOY ☐ GIRL

TEACHER

SCHOOL DISTRICT

GRADE DATE

Prepared by the staff of the Evaluation and Testing Department

Wai-Ching Ho **William McCook**
Susan Detienne **Pamela Kuzma**

Consultants: Dr. John B. Carroll; Dr. J. Thomas Hastings; Mr. Louis A. McElroy; Dr. Donald E. Super; Dr. Ralph W. Tyler; Dr. Bert W. Westbrook

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CLEVELAND, OHIO
April, 1973

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Occupational Development Inventory — Elementary Level

Part III: Occupational Interest, Attitude, and Value

This is not a test. It is to find out how you feel about school subjects, about work, and about yourself. There are no right or wrong answers. Each answer should be what is true for you.

The results will be used to help you become better prepared for work in the future.

Occupational Development Inventory — Elementary Level
Part III: Occupational Interest, Attitude, and Value

Section 1 — School Subject

In this section, please indicate how well you think you are doing in each school subject. Mark an "X" in the box under Below Average, Average, or Above Average that is true for you.

Below Average — means you believe that you are not doing as well as most of your classmates.

Average — means you believe that you are doing as well as most of your classmates.

Above Average — means you believe that you are doing better than most of your classmates.

EXAMPLE If you think you are doing better than most of your classmates in math, mark the box like this:

	Below Average	Average	Above Average
Math	☐	☐	☒

		Below Average	Average	Above Average
1.	Math	☐	☐	☐
2.	Reading	☐	☐	☐
3.	Writing	☐	☐	☐
4.	Art	☐	☐	☐
5.	Music	☐	☐	☐
6.	Science	☐	☐	☐
7.	Social Studies	☐	☐	☐
8.	Gym	☐	☐	☐

Section 2 — Interest

a) This section is to find out how much you like or do not like each school subject. Mark an "X" in the box under Do Not Like, Not Sure, or Like that is true for you.

Do Not Like — means you do not like the school subject.

Not Sure — means you cannot decide whether you like the school subject or not.

Like — means you like the school subject.

EXAMPLE If you cannot decide whether you like science or not, mark the box like this:

	Do Not Like	Not Sure	Like
Science	☐	☒	☐

		Do Not Like	Not Sure	Like
1.	Math	☐	☐	☐
2.	Reading	☐	☐	☐
3.	Writing	☐	☐	☐
4.	Art	☐	☐	☐
5.	Music	☐	☐	☐
6.	Science	☐	☐	☐
7.	Social Studies	☐	☐	☐
8.	Gym	☐	☐	☐

b) List three things you like to do when you have free time.

____________________ ____________________ ____________________

c) Below is a list of activities and explanations of what they mean. Mark the boxes which show how much you like doing the following activities:

	Do Not Like	Not Sure	Like
Physical Activities — means you like to play sports and games that include running, jumping, skipping, climbing, and throwing.	☐	☐	☐
Mental Activities — means you like to think through and solve problems.	☐	☐	☐
Outdoor Activities — means you like to work outdoors. You like to work with animals. You like to plant and grow things.	☐	☐	☐
Working with People — means you like to spend most of your time working or playing with people. You would like teaching or training people. You enjoy getting to know people.	☐	☐	☐
Working with Data — means you like to collect information, make measurements, and record information.	☐	☐	☐
Working with Things — means you like to make or work with objects. You like to work with your hands. You like to operate, adjust, or repair tools and machines.	☐	☐	☐

Section 3 -- Attitude and Value

a) This section is to find out what you think is true about you. Here are what the possible answers mean.

Not Like Me — means the statement is usually not true about you.

Like Me — means the statement is usually true about you.

EXAMPLE If the statement below is true about you, mark the box like this:

	Not Like Me	Like Me
I do well in school.	☐	☒

Mark an "X" in the box which most accurately describes you.

	Not Like Me	Like Me
1. I wish that I were more sure of myself.	☐	☐
2. I am happy with myself most of the time.	☐	☐
3. If I work hard, I usually succeed.	☐	☐
4. I feel that I have the ability to do things as well as most people my age.	☐	☐
5. I feel good about the work I do.	☐	☐
6. No matter how hard I work, I don't get the breaks I need to get ahead.	☐	☐
7. I feel good luck is more important than hard work for success.	☐	☐

b) This section is to find out what you think is true about relationships between people who work together, and your feelings about work. Mark an "X" in the box Do Not Agree, Not Sure, or Agree that shows your true feeling for each statement.

Do Not Agree — means you believe the statement is not true.

Not Sure — means you cannot decide whether the statement is true or not.

Agree — means you believe the statement is true.

		Do Not Agree	Not Sure	Agree
1.	All honest jobs, such as doctors and garbage collectors, are valuable to everyone.	☐	☐	☐
2.	People with high paying jobs should get more respect than those who are paid very little.	☐	☐	☐
3.	Everyone who works honestly for a living should be proud of himself.	☐	☐	☐
4.	People should work well together to get jobs done.	☐	☐	☐
5.	You should praise other people when they do something well.	☐	☐	☐
6.	If you are nice to people, they take advantage of you.	☐	☐	☐
7.	Getting along with other people is not important for a person's success.	☐	☐	☐
8.	In order to make a person look good, he should speak badly of those people around him.	☐	☐	☐
9.	If a person wants to be successful, he should not share his knowledge and skills with other people.	☐	☐	☐

APPENDIX I
OCCUPATIONAL DEVELOPMENT INVENTORY

Elementary Level

Part III: Occupational Interest, Attitude, and Value

DIRECTIONS FOR ADMINISTERING

Prepared by the staff of the Evaluation and Testing Department

Wai-Ching Ho
Susan Detienne
William McCook
Pamela Kuzma

Educational Research Council of America

April, 1973

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Occupational Development Inventory (ODI) — Elementary Level
Part III: Occupational Interest, Attitude, and Value

General Directions

Directions which appear in capitals are to be read aloud by the teacher. Directions in lower case are for the teacher only.

Directions for Administering ODI — Part III

I AM GOING TO GIVE EACH OF YOU A BOOKLET. DO NOT OPEN IT OR WRITE ON IT UNTIL I TELL YOU TO.

Give each student a booklet.

PRINT YOUR NAME ON THE LINE NEXT TO THE WORD "NAME."

Give directions for filling in other identifying information in the box on the cover.

NOW TURN TO THE FIRST PAGE AND READ THE DIRECTIONS TO YOURSELF AS I READ THEM ALOUD.

"THIS IS NOT A TEST. IT IS TO FIND OUT HOW YOU FEEL ABOUT SCHOOL SUBJECTS, ABOUT WORK, AND ABOUT YOURSELF. THERE ARE NO RIGHT OR WRONG ANSWERS. EACH ANSWER SHOULD BE WHAT IS TRUE FOR YOU."

"THE RESULTS WILL BE USED TO HELP YOU BECOME BETTER PREPARED FOR WORK IN THE FUTURE."

Section 1: School Subject

NOW TURN TO PAGE 2 AND READ THE INSTRUCTIONS AS I READ THEM ALOUD. "IN THIS SECTION, PLEASE INDICATE HOW WELL YOU THINK YOU ARE DOING IN EACH SCHOOL SUBJECT. MARK AN "X" IN THE BOX UNDER BELOW AVERAGE, AVERAGE, OR ABOVE AVERAGE THAT IS TRUE FOR YOU."

HERE IS WHAT THE POSSIBLE ANSWERS MEAN.

"BELOW AVERAGE MEANS YOU BELIEVE THAT YOU ARE NOT DOING AS WELL AS MOST OF YOUR CLASSMATES. AVERAGE MEANS YOU BELIEVE THAT YOU ARE DOING AS WELL AS MOST OF YOUR CLASSMATES. ABOVE AVERAGE MEANS YOU BELIEVE THAT YOU ARE DOING BETTER THAN MOST OF YOUR CLASSMATES."

NOW LET'S LOOK AT AN EXAMPLE. IF YOU THINK YOU ARE DOING BETTER THAN MOST OF YOUR CLASSMATES IN MATH, MARK THE BOX THE WAY IT IS DONE IN THIS EXAMPLE.

Demonstrate the marking method on the chalk board. Try another example if necessary.

ARE THERE ANY QUESTIONS?

Discuss any questions the students may have. Make sure each student understands the marking procedure before beginning.

NOW MARK THE BOX FOR EACH SCHOOL SUBJECT WHICH TELLS WHAT YOU THINK IS TRUE FOR YOU. WHEN YOU FINISH THIS PAGE, STOP. REMEMBER THE BEST ANSWER IS WHAT YOU THINK IS TRUE FOR YOU.

NOW, LET US BEGIN.

Read each school subject to the students, and pause to allow time for their responses.

Section 2: Interest

When Section 1 is completed, say:

NOW TURN TO PAGE 3.

THIS SECTION IS VERY MUCH LIKE THE ONE YOU JUST COMPLETED EXCEPT THAT THE ANSWERS HAVE A DIFFERENT MEANING.

READ THE INSTRUCTIONS AT THE TOP OF THE PAGE TO YOURSELF AS I READ THEM ALOUD. "THIS SECTION IS TO FIND OUT HOW MUCH YOU LIKE OR DO NOT LIKE EACH SCHOOL SUBJECT. MARK AN "X" IN THE BOX UNDER DO NOT LIKE, NOT SURE, OR LIKE THAT IS TRUE FOR YOU."

HERE IS WHAT THE POSSIBLE ANSWERS MEAN.

"DO NOT LIKE MEANS YOU DO NOT LIKE THE SCHOOL SUBJECT. NOT SURE MEANS YOU CANNOT DECIDE WHETHER YOU LIKE THE SCHOOL SUBJECT OR NOT. LIKE MEANS YOU LIKE THE SCHOOL SUBJECT."

LET'S LOOK AT THE EXAMPLE. IF YOU CANNOT DECIDE WHETHER YOU LIKE SCIENCE OR NOT, MARK THE BOX UNDER NOT SURE AS IT IS DONE IN THIS EXAMPLE.

Demonstrate the marking method to the students if necessary.

ARE THERE ANY QUESTIONS?

Discuss any questions the students may have. Make sure each student understands the marking procedure before going any further.

NOW MARK HOW MUCH YOU LIKE OR DO NOT LIKE THE SCHOOL SUBJECTS ON THIS PAGE.

Read each school subject to the students, and pause to allow time for their responses.

When all students have completed Page 3, ask them to turn to Page 4.

READ THE INSTRUCTIONS AT THE TOP OF THE PAGE TO YOURSELF AS I READ THEM ALOUD.

"LIST THREE THINGS YOU LIKE TO DO WHEN YOU HAVE FREE TIME."

Allow time for the students to write their responses. When all students have finished, say:

READ THE INSTRUCTIONS BELOW AS I READ THEM ALOUD.

"BELOW IS A LIST OF ACTIVITIES AND EXPLANATIONS OF WHAT THEY MEAN. MARK THE BOXES WHICH SHOW HOW MUCH YOU LIKE DOING THE FOLLOWING ACTIVITIES."

Read each activity and its explanation to the students. The students should respond as each activity is described. Reread the explanation of each activity if necessary.

Section 3: Attitude and Value

After Section 2 is completed, say:

NOW TURN TO PAGE 5 AND READ THE INSTRUCTIONS TO YOURSELF AS I READ THEM ALOUD. "THIS SECTION IS TO FIND OUT WHAT YOU THINK IS TRUE ABOUT YOU." HERE ARE WHAT THE POSSIBLE ANSWERS MEAN.

"NOT LIKE ME MEANS THE STATEMENT IS USUALLY NOT TRUE ABOUT YOU. LIKE ME MEANS THE STATEMENT IS USUALLY TRUE ABOUT YOU."

NOW LOOK AT THE EXAMPLE. IF THE STATEMENT BELOW IS TRUE ABOUT YOU, MARK THE BOX UNDER LIKE ME, AS IT IS DONE IN THIS EXAMPLE.

Demonstrate the marking method on the chalk board if necessary.

ARE THERE ANY QUESTIONS?

Discuss any questions the students may have. Make sure the students understand the marking procedure.

Then read each question to the students, and pause to allow time for their responses.

When all students have completed Page 5, say:

NOW TURN TO PAGE 6.

READ THE DIRECTIONS AT THE TOP OF THE PAGE TO YOURSELF AS I READ THEM ALOUD. "THIS SECTION IS TO FIND OUT WHAT YOU THINK IS TRUE ABOUT RELATIONSHIPS BETWEEN PEOPLE WHO WORK TOGETHER AND YOUR FEELINGS ABOUT WORK. MARK AN "X" IN THE BOX DO NOT AGREE, NOT SURE, OR AGREE THAT SHOWS YOUR TRUE FEELING FOR EACH STATEMENT." HERE ARE WHAT THE POSSIBLE ANSWERS MEAN.

"DO NOT AGREE MEANS YOU BELIEVE THE STATEMENT IS NOT TRUE. NOT SURE MEANS YOU CANNOT DECIDE WHETHER THE STATEMENT IS TRUE OR NOT. AGREE MEANS YOU BELIEVE THE STATEMENT IS TRUE."

ARE THERE ANY QUESTIONS?

Discuss any questions the students may have. Then read each statement to the students making sure that they respond to each one.

WHEN YOU HAVE FINISHED, CLOSE THE BOOKLET.

Collect the booklets immediately.

APPENDIX J

JUNIOR HIGH
LEVEL

OCCUPATIONAL DEVELOPMENT INVENTORY

Part I
Occupational Knowledge

NAME LAST FIRST MIDDLE ☐ BOY ☐ GIRL

TEACHER

SCHOOL DISTRICT

GRADE DATE

Prepared by the staff of the Evaluation and Testing Department

Wai-Ching Ho **William McCook**
Susan Detienne **Pamela Kuzma**

Consultants: Dr. John B. Carroll; Dr. J. Thomas Hastings; Mr. Louis A. McElroy; Dr. Donald E. Super; Dr. Ralph W. Tyler; Dr. Bert W. Westbrook

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Occupational Development Inventory — Junior High Level

Part I: Occupational Knowledge

This is not a test. It is to find out how much you know about work. The results will be used to help you become better prepared for work in the future. You are not expected to know the answer to every question; do the best you can.

Occupational Development Inventory — Junior High Level
Part I: Occupational Knowledge

Section 1 — Common Thread

a. People work at many different jobs. Some of these jobs have something in common and can be grouped together.

Three of these groups are called Health and Personal Services, Protective Services, and Communications.

Health and Personal Services
People with these kinds of jobs take care of and improve the personal appearance, health, food, and general well-being of people or animals.

Protective Services
People with these kinds of jobs protect people and what they own.

Communications
People with these kinds of jobs present ideas and information to other people.

Mark an "X" in the box under the group that you think each job belongs to.

If you think a job belongs to none of these groups, mark an "X" in the box under None of These.

EXAMPLE If you think "fireman" belongs to the group Protective Services, you would mark the box like this:

	Health and Personal Services	Protective Services	Communications	None of These
Fireman	☐	☒	☐	☐

		Health and Personal Services	Protective Services	Communications	None of These
(1)	dentist	☐	☐	☐	☐
(2)	author	☐	☐	☐	☐
(3)	dancer	☐	☐	☐	☐
(4)	FBI agent	☐	☐	☐	☐
(5)	watchman	☐	☐	☐	☐
(6)	barber	☐	☐	☐	☐
(7)	waitress	☐	☐	☐	☐
(8)	telephone operator	☐	☐	☐	☐

b. Another three groups of jobs are Building Construction and Maintenance, Marine Industry, and Mechanics and Metal Working.

Building Construction and Maintenance

People with these kinds of jobs build and take care of buildings, bridges, highways, and other structures.

Marine Industry

People with these kinds of jobs build, operate, and take care of ships and boats.

Mechanics and Metal Working

People with these kinds of jobs work with metals and plastics. They also use and repair tools and machines.

Mark an "X" in the box under the group that you think each job belongs to.

If you think a job belongs to none of these groups, mark an "X" in the box under None of These.

		Building Construction and Maintenance	Marine Industry	Mechanics and Metal Working	None of These
(9)	janitor	☐	☐	☐	☐
(10)	cabinet worker	☐	☐	☐	☐
(11)	toolmaker	☐	☐	☐	☐
(12)	glass blower	☐	☐	☐	☐
(13)	ship's officer	☐	☐	☐	☐
(14)	auto mechanic	☐	☐	☐	☐
(15)	deckhand	☐	☐	☐	☐
(16)	bricklayer	☐	☐	☐	☐

c. Four more groups of jobs are Business and Commerce, Textiles and Leather, Special Technologies, and Extractive Industries.

Business and Commerce
People with these kinds of jobs promote sales, distribute goods or services, keep accounts, and make reports.

Textiles and Leather
People with these kinds of jobs design, make, and take care of products made from fabrics, fur, and leather.

Special Technologies
People with these kinds of jobs use the knowledge of science, mathematics, and mechanical devices.

Extractive Industries
People with these kinds of jobs study or make products from the natural resources of the earth.

Mark an "X" in the box under the group that you think each job belongs to.

If you think a job belongs to none of these groups, mark an "X" in the box under None of These.

		Business and Commerce	Textiles and Leather	Special Technologies	Extractive Industries	None of These
(17)	papermill worker	☐	☐	☐	☐	☐
(18)	mining laborer	☐	☐	☐	☐	☐
(19)	leather cleaner	☐	☐	☐	☐	☐
(20)	television repairman	☐	☐	☐	☐	☐
(21)	sales representative	☐	☐	☐	☐	☐
(22)	cab driver	☐	☐	☐	☐	☐
(23)	dairyman	☐	☐	☐	☐	☐
	payroll clerk	☐	☐	☐	☐	☐
(25)	tailor	☐	☐	☐	☐	☐
(26)	electronic technician	☐	☐	☐	☐	☐

Section 2 — Education and Training

Some jobs usually require a college education. Some jobs do not. Mark an "X" in the box under Yes or No for each job.

Yes — means the job usually requires a college education.

No — means the job usually does not require a college education.

EXAMPLE If you think a doctor usually needs a college education, mark the box like this:

	Yes	No
doctor	☒	☐

		Yes	No
(27)	television repairman	☐	☐
(28)	machinist trainee	☐	☐
(29)	secretary	☐	☐
(30)	teacher	☐	☐
(31)	office clerk	☐	☐
(32)	plumber	☐	☐
(33)	engineer	☐	☐
(34)	banker	☐	☐
(35)	cashier	☐	☐
(36)	receptionist	☐	☐

Section 3 — Relationship Between School Subjects and Work

What you are learning in school can be important for your job in the future. Circle the job that is most closely related to each school subject.

EXAMPLE The job "Secretary" is circled because it is the most closely related to typing.

School Subject	Job			
Typing	Athlete	[✓ Secretary]	Singer	Engineer

	School Subject	Job			
(37)	Math	Accountant	Radio announcer	File clerk	Barber
(38)	English	Salesman	Journalist	Surveyor	Physician
(39)	Home Economics	Teller	Dry cleaner	Librarian	Dietician
(40)	Science	Fisherman	Hotel manager	Geologist	Lawyer
(41)	Music	Bell-hop	Theater usher	Composer	Painter
(42)	Gym	Mailman	Jockey	Playwright	Car mechanic
(43)	Art	Sculptor	Beautician	Stewardess	Toolmaker
	Shop	Carpenter	Dentist	Butcher	Farmer

Section 4 — Determinants and Trends of Employment Opportunities

---

There are many things that influence the demand for workers in various jobs. Read each of the following statements. Mark an "X" in the box under True, False, or Not Sure for each statement.

True — means you think the statement is true.

False — means you think the statement is false.

Not Sure — means you cannot decide if the statement is true or false.

		True	False	Not Sure
(45)	It is easier to get a job when you have a special skill.	☐	☐	☐
(46)	There will be more professional and service jobs in the future.	☐	☐	☐
(47)	Job opportunities in rural and urban areas are the same.	☐	☐	☐
(48)	If there is a big demand for doctors, this means that there are too many doctors.	☐	☐	☐
(49)	Taking care of problems, like pollution, can create new jobs.	☐	☐	☐
(50)	If the birth rate goes down, we will need more teachers.	☐	☐	☐
(51)	In the United States, more people work on farms than in industries.	☐	☐	☐
(52)	New machinery gets rid of some old jobs and creates some new jobs.	☐	☐	☐

Section 5 — Life Style

A person's job influences the way he lives. Circle the job that usually has each of the following effects on a person's life.

EXAMPLE The job "Farmer" is circled because a farmer usually works outdoors.

Effect	Job			
Works outdoors	Cashier	Barber	[✓ Farmer]	Secretary

	Effect	Job			
(53)	be away from home at night	Entertainer	Bankteller	Electrician	Gardener
(54)	have danger	Author	Sales clerk	Detective	Maid
(55)	earn a lot of money	Law clerk	Lawyer	Jail warden	Policeman
(56)	travel a lot	Typist	Telephone operator	Truck driver	Chemist
(57)	have regular daytime working hours	Bank manager	Nurse	Fireman	Airline pilot
(58)	be employed nine months out of each year	Cook	Postmaster	Minister	Professor

APPENDIX K
OCCUPATIONAL DEVELOPMENT INVENTORY

Junior High Level

Part I: Occupational Knowledge

DIRECTIONS FOR ADMINISTERING

Prepared by the staff of the Evaluation and Testing Department

Wai-Ching Ho
Pamela Kuzma
William McCook
Susan Detienne

Educational Research Council of America

April, 1973

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Occupational Development Inventory (ODI) — Junior High Level
Part I: Occupational Knowledge

General Directions

Directions which appear in capitals are to be read aloud by the teacher. Directions in lower case are for the teacher only.

Directions for Administering ODI — Part I

I AM GOING TO GIVE EACH OF YOU A BOOKLET. DO NOT OPEN IT OR WRITE ON IT UNTIL I TELL YOU TO.

Give each student a booklet.

PRINT YOUR NAME ON THE LINE NEXT TO THE WORD "NAME."

Give directions for filling in other identifying information in the box on the cover.

NOW TURN TO THE FIRST PAGE AND READ THE DIRECTIONS TO YOURSELF AS I READ THEM ALOUD.

"THIS IS NOT A TEST. IT IS TO FIND OUT HOW MUCH YOU KNOW ABOUT WORK. THE RESULTS WILL BE USED TO HELP YOU BECOME BETTER PREPARED FOR WORK IN THE FUTURE. YOU ARE NOT EXPECTED TO KNOW THE ANSWER TO EVERY QUESTION; DO THE BEST YOU CAN."

Section 1 — Common Thread

NOW TURN TO PAGE 2 AND READ THE INSTRUCTIONS TO YOURSELF AS I READ THEM ALOUD. "PEOPLE WORK AT MANY DIFFERENT JOBS. SOME OF THESE JOBS HAVE SOMETHING IN COMMON AND CAN BE GROUPED TOGETHER. THREE OF THESE GROUPS ARE CALLED HEALTH AND PERSONAL SERVICES, PROTECTIVE SERVICES, AND COMMUNICATIONS."

Read the definition of each group to the students.

"HEALTH AND PERSONAL SERVICES — PEOPLE WITH THESE KINDS OF JOBS TAKE CARE OF AND IMPROVE THE PERSONAL APPEARANCE, HEALTH, FOOD, AND GENERAL WELL-BEING OF PEOPLE OR ANIMALS.

PROTECTIVE SERVICES — PEOPLE WITH THESE KINDS OF JOBS PROTECT PEOPLE AND WHAT THEY OWN.

COMMUNICATIONS — PEOPLE WITH THESE KINDS OF JOBS PRESENT IDEAS AND INFORMATION TO OTHER PEOPLE.

MARK AN 'X' IN THE BOX UNDER THE GROUP THAT YOU THINK EACH JOB BELONGS TO. IF YOU THINK A JOB BELONGS TO NONE OF THESE GROUPS, MARK AN 'X' IN THE BOX UNDER NONE OF THESE."

NOW LOOK AT THE EXAMPLE. IF YOU THINK "FIREMAN" BELONGS TO THE GROUP PROTECTIVE SERVICES, YOU WOULD MARK THE BOX AS IT IS DONE IN THE EXAMPLE.

Demonstrate the marking procedure on the chalk board.

NOW YOU MAY BEGIN.

If necessary, repeat the definition of each group. Job names may be read aloud if the teacher feels that the students will have difficulty reading them.

When all students have finished Page 2, ask them to turn to Page 3 and say:

"ANOTHER THREE GROUPS OF JOBS ARE BUILDING CONSTRUCTION AND MAINTENANCE, MARINE INDUSTRY, AND MECHANICS AND METAL WORKING."

Read the definition of each group to the students.

"BUILDING CONSTRUCTION AND MAINTENANCE — PEOPLE WITH THESE KINDS OF JOBS BUILD AND TAKE CARE OF BUILDINGS, BRIDGES, HIGHWAYS, AND OTHER STRUCTURES.

MARINE INDUSTRY — PEOPLE WITH THESE KINDS OF JOBS BUILD, OPERATE, AND TAKE CARE OF SHIPS AND BOATS.

MECHANICS AND METAL WORKING — PEOPLE WITH THESE KINDS OF JOBS WORK WITH METALS AND PLASTICS. THEY ALSO USE AND REPAIR TOOLS AND MACHINES.

MARK AN 'X' IN THE BOX UNDER THE GROUP THAT YOU THINK EACH JOB BELONGS TO. IF YOU THINK A JOB BELONGS TO NONE OF THESE GROUPS, MARK AN 'X' IN THE BOX UNDER NONE OF THESE."

NOW BEGIN.

If necessary, repeat the definition of each group. Job names may be read aloud if the teacher feels that the students will have difficulty reading them.

When all the students have finished Page 3, ask them to turn to Page 4 and say:

"FOUR MORE GROUPS OF JOBS ARE BUSINESS AND COMMERCE, TEXTILES AND LEATHER, SPECIAL TECHNOLOGIES, AND EXTRACTIVE INDUSTRIES."

Read the definition of each group to the students.

"BUSINESS AND COMMERCE — PEOPLE WITH THESE KINDS OF JOBS PROMOTE SALES, DISTRIBUTE GOODS OR SERVICES, KEEP ACCOUNTS, AND MAKE REPORTS.

TEXTILES AND LEATHER — PEOPLE WITH THESE KINDS OF JOBS DESIGN, MAKE, AND TAKE CARE OF PRODUCTS MADE FROM FABRICS, FUR, AND LEATHER.

SPECIAL TECHNOLOGIES — PEOPLE WITH THESE KINDS OF JOBS USE THE KNOWLEDGE OF SCIENCE, MATHEMATICS, AND MECHANICAL DEVICES.

EXTRACTIVE INDUSTRIES — PEOPLE WITH THESE KINDS OF JOBS STUDY OR MAKE PRODUCTS FROM THE NATURAL RESOURCES OF THE EARTH.

MARK AN 'X' IN THE BOX UNDER THE GROUP THAT YOU THINK EACH JOB BELONGS TO. IF YOU THINK A JOB BELONGS TO NONE OF THESE GROUPS, MARK AN 'X' IN THE BOX UNDER NONE OF THESE."

NOW BEGIN.

If necessary, repeat the definition of each group and read the names of the jobs.

Section 2 — Education and Training

When all the students have completed Page 4, ask them to turn to Page 5 and say:

> "SOME JOBS USUALLY REQUIRE A COLLEGE EDUCATION. SOME JOBS DO NOT. MARK AN 'X' UNDER YES OR NO FOR EACH JOB.
>
> YES MEANS THE JOB USUALLY REQUIRES A COLLEGE EDUCATION. NO MEANS THE JOB USUALLY DOES NOT REQUIRE A COLLEGE EDUCATION."
>
> NOW LOOK AT THE EXAMPLE. IF YOU THINK A DOCTOR USUALLY NEEDS A COLLEGE EDUCATION, YOU WOULD MARK THE BOX AS IT IS DONE IN THE EXAMPLE.

Demonstrate the marking procedure on the chalk board if necessary.

> NOW BEGIN.

The job names may be read aloud if the teacher feels the students would have difficulty reading them.

Section 3 — Relationship Between School Subjects and Work.

When all the students have completed Page 5, ask them to turn to Page 6 and say:

> "WHAT YOU ARE LEARNING IN SCHOOL CAN BE IMPORTANT FOR YOUR JOB IN THE FUTURE. CIRCLE THE JOB THAT IS MOST CLOSELY RELATED TO EACH SCHOOL SUBJECT."
>
> LOOK AT THE EXAMPLE. THE JOB "SECRETARY" IS CIRCLED BECAUSE IT IS THE MOST CLOSELY RELATED TO TYPING.

Reread the directions if necessary.

> ARE THERE ANY QUESTIONS?

Answer any questions the student may have, then say:

> NOW BEGIN.

Section 4 — Determinants and Trends of Employment Opportunities

When all the students have completed Page 6, ask them to turn to Page 7 and say:

> "THERE ARE MANY THINGS THAT INFLUENCE THE DEMAND FOR WORKERS IN VARIOUS JOBS. READ EACH OF THE FOLLOWING STATEMENTS. MARK AN 'X' IN THE BOX UNDER TRUE, FALSE, OR NOT SURE FOR EACH STATEMENT.
>
> TRUE MEANS YOU THINK THE STATEMENT IS TRUE.
> FALSE MEANS YOU THINK THE STATEMENT IS FALSE.
> NOT SURE MEANS YOU CANNOT DECIDE IF THE STATEMENT IS TRUE OR FALSE."
>
> ARE THERE ANY QUESTIONS?

Answer any questions that the students may have, then say:

> YOU MAY BEGIN.

Section 5 — Life Style

When all the students have finished Page 7, ask them to turn to Page 8 and say:

> "A PERSON'S JOB INFLUENCES THE WAY HE LIVES. CIRCLE THE JOB THAT USUALLY HAS EACH OF THE FOLLOWING EFFECTS ON A PERSON'S LIFE."
>
> LOOK AT THE EXAMPLE. THE JOB "FARMER" IS CIRCLED BECAUSE A FARMER USUALLY WORKS OUTDOORS.
>
> ARE THERE ANY QUESTIONS?

Answer any questions the students may have and then say:

> NOW BEGIN.

When all the students have completed this page, collect the booklets.

APPENDIX L

JUNIOR HIGH
LEVEL

OCCUPATIONAL DEVELOPMENT INVENTORY

Part II
Occupational Vocabulary

NAME LAST FIRST MIDDLE BOY GIRL

TEACHER

SCHOOL DISTRICT

GRADE DATE

Prepared by the staff of the Evaluation and Testing Department

Wai-Ching Ho **William McCook**
Susan Detienne **Pamela Kuzma**

Consultants: Dr. John B. Carroll; Dr. J. Thomas Hastings; Mr. Louis A. McElroy; Dr. Donald E. Super; Dr. Ralph W. Tyler; Dr. Bert W. Westbrook

EDUCATIONAL RESEARCH COUNCIL
OF AMERICA
CLEVELAND, OHIO

April, 1973

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Occupational Development Inventory — Junior High Level
Part II: Occupational Vocabulary

Directions:

Read each problem.
Choose the best answer to fill in the blank.
Circle the letter beside the answer you choose.
Do not write in the blank.

Sample:

Another word for labor is______.

a. play
[✓ b.] work
c. rest
d. dream

1. If you own your own business you are______.

a. a customer
b. unemployed
c. self-employed
d. a trainee

2. Ken is a very good construction worker. Ken is______at his job.

a. incompetent
b. non-professional
c. competent
d. unskilled

3. An amount of money taken from a salary for government expenses is______.

a. a payroll savings plan
b. a minimum salary
c. a pension
d. an income tax

4. Occupations in the Marine Industry have to do with______.

a. ships and the sea
b. production of leather goods
c. chemical products
d. petroleum and mining

5. A supervisor is one who______.

a. teaches in a college
b. helps people find jobs
c. collects taxes
d. oversees the work

6. If you receive a promotion because of good job performance, you have made______.

a. a cutback
b. an advancement
c. a regression
d. a placement

7. A singer is an example of the occupations in______.

a. Communications
b. Commerce
c. Special Technologies
d. Transportation

8. Usually very little or no training is required to obtain______.

a. a skilled job
b. a technical job
c. an unskilled job
d. a professional job

9. George is working for a carpenter to learn the trade. George is______.

a. a journeyman
b. a master tradesman
c. an apprentice
d. a proprietor

10. Manpower refers to the______.

a. mass production of goods
b. work done by a craftsman
c. power of a union
d. number of men available to do a job

11. Textiles refer to various kinds of______.

a. fabrics
b. metals
c. machines
d. technologies

12. Using machines to operate elevators is an example of______.

a. work force
b. clerical machines
c. automation
d. manual labor

13. A temporary decline in business is______.

a. an inflation
b. a recession
c. a success
d. a boom

14. A government plan that provides money for workers who are retired is called______.

a. Social Security
b. Welfare
c. Workmen's Compensation
d. United Fund

15. Occupations in Health and Personal Services usually take care of______.

a. a person's appearance and well-being
b. a person's investments
c. an employee's benefits
d. an employer's rights

APPENDIX M
OCCUPATIONAL DEVELOPMENT INVENTORY

Junior High Level
Part II: Occupational Vocabulary

DIRECTIONS FOR ADMINISTERING

Prepared by the staff of the Evaluation and Testing Department

Wai-Ching Ho
William McCook
Pamela Kuzma
Susan Detienne

Educational Research Council of America

April, 1973

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Occupational Development Inventory (ODI) — Junior High Level

Part II: Occupational Vocabulary

General Directions

Directions which appear in capitals are to be read aloud by the teacher. Directions in lower case are for the teacher only.

Directions for Administering ODI — Part II

I AM GOING TO GIVE EACH OF YOU A BOOKLET. DO NOT OPEN IT OR WRITE ON IT UNTIL I TELL YOU TO.

Give each student a booklet.

PRINT YOUR NAME ON THE LINE NEXT TO THE WORD "NAME."

Give directions for filling in other identifying information in the box on the cover.

NOW TURN TO THE FIRST PAGE. READ THE DIRECTIONS TO YOURSELF AS I READ THEM ALOUD.

"READ EACH PROBLEM. CHOOSE THE BEST ANSWER TO FILL IN THE BLANK. CIRCLE THE LETTER BESIDE THE ANSWER YOU CHOOSE. DO NOT WRITE IN THE BLANK."

NOW LOOK AT THE SAMPLE PROBLEM.

Read the sample problem and the four possible answers aloud.

THE ANSWER IS "WORK", SO A CIRCLE IS DRAWN AROUND THE LETTER BESIDE THE WORD "WORK."

Demonstrate the marking system on the chalk board.

ARE THERE ANY QUESTIONS?

Discuss any questions the students may have, making sure each student understands the marking procedure.

NOW, YOU MAY BEGIN.

If the teacher believes the students may have difficulty reading the problems, he should read each problem aloud.

Allow time for the students to attempt each problem, then say:

CLOSE YOUR BOOKLET.

Collect the booklets immediately.

APPENDIX N

JUNIOR HIGH

LEVEL

OCCUPATIONAL DEVELOPMENT INVENTORY

Part III
Occupational Interest, Attitude, and Value

NAME LAST FIRST MIDDLE ☐ BOY ☐ GIRL

TEACHER

SCHOOL DISTRICT

GRADE DATE

Prepared by the staff of the Evaluation and Testing Department

Wai-Ching Ho **William McCook**
Susan Detienne **Pamela Kuzma**

Consultants: Dr. John B. Carroll; Dr. J. Thomas Hastings; Mr. Louis A. McElroy; Dr. Donald E. Super; Dr. Ralph W. Tyler; Dr. Bert W. Westbrook

EDUCATIONAL RESEARCH COUNCIL
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CLEVELAND, OHIO
April, 1973

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Occupational Development Inventory — Junior High Level

Part III: Occupational Interest, Attitude, and Value

This is not a test. It is to find out how you feel about school subjects, about work, and about yourself. There are no right or wrong answers. Each answer should be what is true for you.

The results will be used to help you become better prepared for work in the future.

Occupational Development Inventory — Junior High Level
Part III: Occupational Interest, Attitude, and Value

Section 1 — School Subject

In this section, please indicate how well you think you are doing in each school subject. Mark an "X" in the box under Below Average, Average, Above Average, or Have Not Taken that is true for you.

Below Average	—	means you believe that you are not doing as well as most of your classmates.
Average	—	means you believe that you are doing as well as most of your classmates.
Above Average	—	means you believe that you are doing better than most of your classmates.
Have Not Taken	—	means you have not taken that school subject.

EXAMPLE If you think you are doing better than most of your classmates in math, mark the box like this:

	Below Average	Average	Above Average	Have Not Taken
Math	☐	☐	☒	☐

	Below Average	Average	Above Average	Have Not Taken
1. Math	☐	☐	☐	☐
2. English	☐	☐	☐	☐
3. Art	☐	☐	☐	☐
4. Music	☐	☐	☐	☐
5. Science	☐	☐	☐	☐
6. Social Studies	☐	☐	☐	☐
7. Foreign Language	☐	☐	☐	☐
8. Gym	☐	☐	☐	☐
9. Home Economics	☐	☐	☐	☐
10. Shop	☐	☐	☐	☐
11. Health	☐	☐	☐	☐

Section 2 — Interest

---

a) This section is to find out how much you like or do not like each school subject. Mark an "X" in the box under Do Not Like, Not Sure, Like, or Have Not Taken that is true for you.

Do Not Like	—	means you do not like the school subject.
Not Sure	—	means you cannot decide whether you like the school subject or not.
Like	—	means you like the school subject.
Have Not Taken	—	means you have not taken that school subject.

EXAMPLE If you cannot decide whether you like science or not, mark the box like this:

	Do Not Like	Not Sure	Like	Have Not Taken
Science	☐	☒	☐	☐

		Do Not Like	Not Sure	Like	Have Not Taken
12.	Math	☐	☐	☐	☐
13.	English	☐	☐	☐	☐
14.	Art	☐	☐	☐	☐
15.	Music	☐	☐	☐	☐
16.	Science	☐	☐	☐	☐
17.	Social Studies	☐	☐	☐	☐
18.	Foreign Language	☐	☐	☐	☐
19.	Gym	☐	☐	☐	☐
20.	Home Economics	☐	☐	☐	☐
21.	Shop	☐	☐	☐	☐
22.	Health	☐	☐	☐	☐

b) List three of the activities you like to do when you have free time.

23. ____________________ 24. ____________________ 25. ____________________

c) Below is a list of activities and explanations of what they mean. Mark the boxes which show how much you like doing the following activities:

	Do Not Like	Not Sure	Like
26. Physical Activities — means you like to play sports, enjoy doing work that involves using your hands and physical strength.	☐	☐	☐
27. Mental Activities — means you like to think through and solve problems.	☐	☐	☐
28. Outdoor Activities — means you like to work outdoors. You like to work with animals. You like to plant and grow things.	☐	☐	☐
29. Working with People — means you like to spend most of your time working or playing with people. You would like teaching or training people. You enjoy getting to know people.	☐	☐	☐
30. Working with Data — means you like to collect information (data), make measurements, record information, and make judgments about the information you collected.	☐	☐	☐
31. Working with Things — means you like to make or work with objects. You like to work with your hands. You like to operate, adjust, or repair tools and machines.	☐	☐	☐

ection 3 — Attitude and Value

a) This section is to find out what you think is true about you. Here is what the possible answers mean.

Not Like me — means the statement is usually not true about you.

Like me — means the statement is usually true about you.

EXAMPLE If the statement below is usually true about you, mark the box like this:

	Not Like me	Like me
I do well in school.	☐	☒

Mark an "X" in the box which most accurately describes you.

		Not Like me	Like me
32.	I wish that I were more sure of myself.	☐	☐
33.	I am happy with myself most of the time.	☐	☐
34.	If I work hard, I usually succeed.	☐	☐
35.	I feel that I have the ability to do things as well as most people my age.	☐	☐
36.	I feel good about the work I do.	☐	☐
37.	No matter how hard I work, I don't get the breaks I need to get ahead.	☐	☐
38.	I feel good luck is more important than hard work for success.	☐	☐

b) This section is to find out what you think is true about relationships between people who work together, and your feelings about work. Mark an "X" in the box under Do Not Agree, Not Sure, or Agree that shows your true feeling for each statement.

Do Not Agree — means you believe the statement is not true.

Not Sure — means you cannot decide whether the statement is true or not.

Agree — means you believe the statement is true.

		Do Not Agree	Not Sure	Agree
39.	A person should have education and training that will prepare him for more than one occupation.	☐	☐	☐
40.	In order to make oneself look good, one should speak badly of those people around him.	☐	☐	☐
41.	All honest jobs, such as doctors and garbage collectors, are valuable to everyone.	☐	☐	☐
42.	If a person wants to be successful, he should not share his knowledge and skills with other people.	☐	☐	☐
43.	A person can seldom change his occupation once he makes his choice.	☐	☐	☐
44.	Work experience and further education usually enable a person to advance to better jobs.	☐	☐	☐
45.	People with high paying jobs should get more respect than those who are paid very little.	☐	☐	☐
[illegible]6.	Manual work is of less value than mental work.	☐	☐	☐

		Do Not Agree	Not Sure	Agree
47.	One should praise other people when they do something well.	☐	☐	☐
48.	Getting along with other people is not important for a person's success.	☐	☐	☐
49.	Everyone who works honestly for a living should be proud of himself.	☐	☐	☐
50.	A person can only be trained for one job.	☐	☐	☐
51.	If you are nice to people, they will take advantage of you.	☐	☐	☐
52.	People should work well together to get jobs done.	☐	☐	☐

c) This section is to find out what will be important to you when you choose a job. Mark an "X" in the box under Not Important, Somewhat Important, or Very Important that shows how important each of the following is to you in selecting a job.

		Not Important	Somewhat Important	Very Important
53.	Help other people	☐	☐	☐
54.	Make a lot of money	☐	☐	☐
55.	Be looked up to by other people	☐	☐	☐
56.	Seldom be laid off	☐	☐	☐
57.	Have an opportunity to get ahead	☐	☐	☐
58.	Collect and examine information	☐	☐	☐
59.	Tell people what to do	☐	☐	☐
60.	Think up new ways of doing things	☐	☐	☐
61.	Make own decisions	☐	☐	☐
62.	Get recognition for good work	☐	☐	☐
63.	Work in a clean and nice place	☐	☐	☐
64.	Get along with coworkers	☐	☐	☐
65.	Need to solve new problems frequently	☐	☐	☐
66.	Do the same routine work	☐	☐	☐
67.	Make objects and use tools and machinery	☐	☐	☐
68.	Have regular daytime working hours	☐	☐	☐
69.	Be able to take pride in the work	☐	☐	☐
70.	Be interested in the work	☐	☐	☐
71.	Make use of own special talents	☐	☐	☐
72.	Work with people most of the time	☐	☐	☐

APPENDIX O

OCCUPATIONAL DEVELOPMENT INVENTORY

Junior High Level

Part III: Occupational Interest, Attitude. and Value

DIRECTIONS FOR ADMINISTERING

Prepared by the staff of the Evaluation and Testing Department

Wai-Ching Ho
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William McCook
Susan Detienne

Educational Research Council of America

April, 1973

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Occupational Development Inventory (ODI) — Junior High Level
Part III: Occupational Interest, Attitude, and Value

General Directions

Directions which appear in capitals are to be read aloud by the teacher. Directions in lower case are for the teacher only.

Directions for Administering ODI — Part III

I AM GOING TO GIVE EACH OF YOU A BOOKLET. DO NOT OPEN IT OR WRITE ON IT UNTIL I TELL YOU TO.

Give each student a booklet.

PRINT YOUR NAME ON THE LINE NEXT TO THE WORD "NAME."

Give directions for filling in other identifying information in the box on the cover.

NOW TURN TO THE FIRST PAGE AND READ THE DIRECTIONS TO YOURSELF AS I READ THEM ALOUD.

"THIS IS NOT A TEST. IT IS TO FIND OUT HOW YOU FEEL ABOUT SCHOOL SUBJECTS, ABOUT WORK, AND ABOUT YOURSELF. THERE ARE NO RIGHT OR WRONG ANSWERS. EACH ANSWER SHOULD BE WHAT IS TRUE FOR YOU."

"THE RESULTS WILL BE USED TO HELP YOU BECOME BETTER PREPARED FOR WORK IN THE FUTURE."

Section 1 – School Subject

NOW TURN TO PAGE 2 AND READ THE INSTRUCTIONS TO YOURSELF AS I READ THEM ALOUD. "IN THIS SECTION, PLEASE INDICATE HOW WELL YOU THINK YOU ARE DOING IN EACH SCHOOL SUBJECT. MARK AN 'X' IN THE BOX UNDER BELOW AVERAGE, AVERAGE, ABOVE AVERAGE, OR HAVE NOT TAKEN THAT IS TRUE FOR YOU."

HERE IS WHAT THE POSSIBLE ANSWERS MEAN.

"BELOW AVERAGE MEANS YOU BELIEVE THAT YOU ARE NOT DOING AS WELL AS MOST OF YOUR CLASSMATES. AVERAGE MEANS YOU BELIEVE THAT YOU ARE DOING AS WELL AS MOST OF YOUR CLASSMATES. ABOVE AVERAGE MEANS YOU BELIEVE THAT YOU ARE DOING BETTER THAN MOST OF YOUR CLASSMATES. HAVE NOT TAKEN MEANS YOU HAVE NOT TAKEN THAT SCHOOL SUBJECT."

NOW LOOK AT THE EXAMPLE. IF YOU THINK YOU ARE DOING BETTER THAN MOST OF YOUR CLASSMATES IN MATH, MARK THE BOX THE WAY IT IS DONE IN THIS EXAMPLE.

Demonstrate the marking method on the chalk board. Try another example if necessary.

ARE THERE ANY QUESTIONS?

Discuss any questions the students may have. Make sure each student understands the marking procedure before beginning.

NOW MARK THE BOX FOR EACH SCHOOL SUBJECT WHICH TELLS WHAT YOU THINK IS TRUE FOR YOU. REMEMBER THE BEST ANSWER IS WHAT YOU THINK IS TRUE FOR YOU.

NOW, YOU MAY BEGIN.

If the teacher believes the students may have difficulty reading the problems, he should read each problem aloud.

Section 2—Interest

When Section 1 is completed by all the students, say:

NOW TURN TO PAGE 3.

THIS SECTION IS VERY MUCH LIKE THE ONE YOU JUST COMPLETED EXCEPT THAT THE ANSWERS HAVE A DIFFERENT MEANING.

READ THE INSTRUCTIONS AT THE TOP OF THE PAGE TO YOURSELF AS I READ THEM ALOUD. "THIS SECTION IS TO FIND OUT HOW MUCH YOU LIKE OR DO NOT LIKE EACH SCHOOL SUBJECT. MARK AN 'X' IN THE BOX UNDER DO NOT LIKE, NOT SURE, LIKE, OR HAVE NOT TAKEN THAT IS TRUE FOR YOU."

HERE IS WHAT THE POSSIBLE ANSWERS MEAN.

"DO NOT LIKE MEANS YOU DO NOT LIKE THE SCHOOL SUBJECT. NOT SURE MEANS YOU CANNOT DECIDE WHETHER YOU LIKE THE SCHOOL SUBJECT OR NOT. LIKE MEANS YOU LIKE THE SCHOOL SUBJECT. HAVE NOT TAKEN MEANS YOU HAVE NOT TAKEN THAT SCHOOL SUBJECT."

NOW LOOK AT THE EXAMPLE. IF YOU CANNOT DECIDE WHETHER YOU LIKE SCIENCE OR NOT, MARK THE BOX THE WAY IT IS DONE IN THIS EXAMPLE.

Demonstrate the marking method to the students if necessary.

ARE THERE ANY QUESTIONS?

Discuss any questions the students may have. Make sure each student understands the marking procedure.

NOW MARK HOW MUCH YOU LIKE OR DO NOT LIKE THE SCHOOL SUBJECTS ON THIS PAGE.

If the teacher believes the students may have difficulty reading the problems, he should read each problem aloud.

When all students have completed Page 3, ask them to turn to Page 4.

NOW LIST THE THREE ACTIVITIES YOU LIKE TO DO WHEN YOU HAVE FREE TIME.

Allow time for the students to list the activities, then say:

READ THE NEXT INSTRUCTIONS TO YOURSELF AS I READ THEM ALOUD. "BELOW IS A LIST OF ACTIVITIES AND EXPLANATIONS OF WHAT THEY MEAN. MARK THE BOXES WHICH SHOW HOW MUCH YOU LIKE DOING THE FOLLOWING ACTIVITIES."

Read each activity and its explanation to the students. The students should respond as each activity is described. Reread the explanation of each activity if necessary.

Section 3 — Attitude and Value

After Section 2 is completed, say:

NOW TURN TO PAGE 5 AND READ THE INSTRUCTIONS TO YOURSELF AS I READ THEM ALOUD. " THIS SECTION IS TO FIND OUT WHAT YOU THINK IS TRUE ABOUT YOU. HERE IS WHAT THE POSSIBLE ANSWERS MEAN.

"NOT LIKE ME MEANS THE STATEMENT IS USUALLY NOT TRUE ABOUT YOU. LIKE ME MEANS THE STATEMENT IS USUALLY TRUE ABOUT YOU."

NOW LOOK AT THE EXAMPLE. IF THE STATEMENT BELOW IS USUALLY TRUE ABOUT YOU, YOU WOULD MARK THE BOX THE WAY IT IS DONE IN THIS EXAMPLE.

Demonstrate the marking method on the chalk board if necessary.

ARE THERE ANY QUESTIONS?

Discuss any questions the students may have. Make sure the students understand the marking procedure.

Read each problem to the students if necessary. Allow time for their responses.

When all students have completed Page 5, say:

NOW TURN TO PAGE 6.

READ THE INSTRUCTIONS AT THE TOP OF THE PAGE TO YOURSELF AS I READ THEM ALOUD. "THIS SECTION IS TO FIND OUT WHAT YOU THINK IS TRUE ABOUT RELATIONSHIPS BETWEEN PEOPLE WHO WORK TOGETHER, AND YOUR FEELINGS ABOUT WORK. MARK AN 'X' IN THE BOX UNDER DO NOT AGREE, NOT SURE, OR AGREE THAT SHOWS YOUR TRUE FEELING FOR EACH STATEMENT." HERE IS WHAT THE POSSIBLE ANSWERS MEAN.

"DO NOT AGREE MEANS YOU BELIEVE THE STATEMENT IS NOT TRUE. NOT SURE MEANS YOU CANNOT DECIDE WHETHER THE STATEMENT IS TRUE OR NOT. AGREE MEANS YOU BELIEVE THE STATEMENT IS TRUE."

ARE THERE ANY QUESTIONS?

Discuss any questions the students may have. Then read each statement to the students making sure that they respond to each one.

When all students have completed Page 6, say:

TURN TO PAGE 7.

When all students have completed Page 7, say:

NOW TURN TO PAGE 8.

READ THE INSTRUCTIONS AT THE TOP OF THE PAGE TO YOURSELF AS I READ THEM ALOUD. "THIS SECTION IS TO FIND OUT WHAT WILL BE IMPORTANT TO YOU WHEN YOU CHOOSE A JOB. MARK AN 'X' IN THE BOX UNDER NOT IMPORTANT, SOMEWHAT IMPORTANT, OR VERY IMPORTANT THAT SHOWS HOW IMPORTANT EACH OF THE FOLLOWING IS TO YOU IN SELECTING A JOB."

ARE THERE ANY QUESTIONS?

Discuss any questions the students may have. Demonstrate the marking procedure on the chalk board if necessary. If the teacher feels that the students may have difficulty reading the problems, he should read them aloud.

Then say:

PLEASE BEGIN. WHEN YOU HAVE FINISHED, CLOSE THE BOOKLET.

When all the students have completed Page 8, collect the booklets immediately.

APPENDIX P

JUNIOR HIGH
LEVEL

OCCUPATIONAL DEVELOPMENT INVENTORY

Part IV
Occupational Planning

(Interview Guide)

Prepared by the staff of the Evaluation and Testing Department

Wai-Ching Ho **William McCook**
Susan Detienne **Pamela Kuzma**

Consultants: Dr. John B. Carroll; Dr. J. Thomas Hastings; Mr. Louis A. McElroy; Dr. Donald E. Super; Dr. Ralph W. Tyler; Dr. Bert W. Westbrook

EDUCATIONAL RESEARCH COUNCIL
OF AMERICA
CLEVELAND, OHIO

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Occupational Development Inventory — Junior High Level

Part IV: Occupational Planning

DIRECTIONS

In administering the Occupational Planning section of the Occupational Development Inventory, it is essential to first establish rapport with the student to encourage his cooperation and to successfully complete the interview. Establishing this rapport depends upon the judgment of the interviewer, taking into account the personality of the student and other relevant variables in the interview situation.

The room in which the interview will take place should be well lighted and quiet. It should contain a chair for the interviewer and one for the student, as well as a table large enough to spread out the interview materials (ten large cards).

When the student arrives for the interview, the interviewer should introduce himself and explain that the purpose of the interview is to find out each student's tentative occupational preferences and how much he knows about preparing for these occupations. This information will be used to help students become better prepared for work in the future.

The student identifying information that appears at the top of the Record Sheet should be filled in next. Student responses to all sections should be recorded on the Record Sheet. A tape should also be made of the entire interview. The interviewer will not be responsible for scoring the interview, and at no time should he indicate if the student has made a correct or incorrect response.

Occupational Development Inventory — Junior High Level
Part IV: Occupational Planning

Note: Directions typed in lower case are for the interviewer only and should not be read aloud. Directions typed all in capital letters are to be read aloud exactly as written, in a natural tone of voice.

When there are alternative directions to allow for different situations, these alternatives are marked with an asterisk (*). If the student is unable and/or too frustrated to complete any part of the interview, skip to the next part. (Note the instructions given in boxes.) Greatest care should be taken not to frustrate the student.

1. Reasons for Working

PEOPLE WORK FOR MANY DIFFERENT REASONS. SOME REASONS ARE PERSONAL AND DO NOT HAVE MUCH TO DO WITH OTHER PEOPLE. SOME REASONS HAVE TO DO WITH SOCIETY BECAUSE THE WORK IS NEEDED BY OTHER PEOPLE.

WHAT ARE SOME OF THE PERSONAL REASONS WHY PEOPLE WORK?

Record the student's response(s) on the Record Sheet.

CAN YOU GIVE ME SOME REASONS WHY WORK IS IMPORTANT TO SOCIETY?

(Make sure that the student has not mistaken "society" for "high society.")

Record the student's response(s) on the Record Sheet.

2. Tentative Occupational Preference(s)

a. *For Experimental Group students, begin with the following:

YOU ARE GOING TO LEARN IN YOUR SCHOOL THE DIFFERENT JOBS THAT PEOPLE DO.

*For Control Group students, begin with the following:

PEOPLE WORK AT MANY DIFFERENT JOBS.

For all students, continue with:

SOME OF THESE JOBS HAVE SOMETHING IN COMMON.
I AM GOING TO SHOW YOU ONE WAY IN WHICH THE JOBS CAN BE GROUPED.

Lay each of the following cards on the table and read it to the student.

SOME JOBS CAN BE GROUPED AS:

(1) HEALTH AND PERSONAL SERVICES. PEOPLE WITH THESE KINDS OF JOBS TAKE CARE OF AND IMPROVE THE PERSONAL APPEARANCE, HEALTH, FOOD, AND GENERAL WELL-BEING OF PEOPLE OR ANIMALS.

SOME JOBS CAN BE GROUPED AS:

(2) PROTECTIVE SERVICES. PEOPLE WITH THESE KINDS OF JOBS PROTECT PEOPLE AND THEIR PROPERTY.

SOME JOBS CAN BE GROUPED AS:

(3) COMMUNICATIONS. PEOPLE WITH THESE KINDS OF JOBS PRESENT IDEAS AND INFORMATION TO OTHER PEOPLE.

SOME JOBS CAN BE GROUPED AS:

(4) BUILDING CONSTRUCTION AND MAINTENANCE. PEOPLE WITH THESE KINDS OF JOBS BUILD AND TAKE CARE OF BUILDINGS, BRIDGES, HIGHWAYS, AND OTHER STRUCTURES.

SOME JOBS CAN BE GROUPED AS:

(5) MARINE INDUSTRY. PEOPLE WITH THESE KINDS OF JOBS BUILD, OPERATE, AND TAKE CARE OF SHIPS AND BOATS.

SOME JOBS CAN BE GROUPED AS:

(6) MECHANICS AND METAL WORKING. PEOPLE WITH THESE KINDS OF JOBS WORK WITH METALS AND PLASTICS. THEY ALSO USE AND REPAIR TOOLS AND MACHINES.

SOME JOBS CAN BE GROUPED AS:

(7) BUSINESS AND COMMERCE. PEOPLE WITH THESE KINDS OF JOBS PROMOTE SALES, DISTRIBUTE GOODS OR SERVICES, KEEP ACCOUNTS, AND MAKE REPORTS.

SOME JOBS CAN BE GROUPED AS:

(8) TEXTILES AND LEATHER. PEOPLE WITH THESE KINDS OF JOBS DESIGN, MAKE, AND TAKE CARE OF PRODUCTS MADE FROM FABRICS, FUR, AND LEATHER.

SOME JOBS CAN BE GROUPED AS:

(9) SPECIAL TECHNOLOGIES. PEOPLE WITH THESE KINDS OF JOBS USE THE KNOWLEDGE OF SCIENCE, MATHEMATICS, AND MECHANICAL DEVICES.

SOME JOBS CAN BE GROUPED AS:

(10) EXTRACTIVE INDUSTRIES. PEOPLE WITH THESE KINDS OF JOBS STUDY OR MAKE PRODUCTS FROM THE NATURAL RESOURCES OF THE EARTH.

Then say:

WHICH OF THESE GROUPS OF JOBS INTERESTS YOU?

Record the student's response(s) on the Record Sheet.

*If the student is unable to indicate a preference, forget the clusters, remove all the cards, and proceed with:

WHAT KIND OF WORK WOULD YOU LIKE TO DO IN THE FUTURE?

Record the student's response(s) on the Record Sheet. Then turn to page 6, Section 3, Interest, Ability, and Value.

*If the student selects only one cluster, proceed to the following directions:

*If the student selects more than one cluster, then ask:

WHICH GROUP INTERESTS YOU MOST?

Circle the student's response on the Record Sheet.

(If the student cannot decide which group he likes best, the interviewer will pick one, and star that cluster on the Record Sheet.)

Remove all cards except the one selected. Turn this card over, and say:

THESE ARE SOME EXAMPLES OF JOBS IN ______________________.
(insert cluster name)

Allow time for the student to look at the examples. (The underlined subheadings refer to subdivisions of jobs in the cluster. It is not necessary to explain these subdivisions unless the student questions them.) Then ask:

WHAT JOB DO YOU THINK YOU WOULD LIKE TO HAVE IN THE FUTURE? THE JOB THAT YOU PICK DOES NOT NEED TO BE ON THIS CARD.

Record the student's response(s) on the Record Sheet.

*If the student indicates one job, turn to page 6, Section 3, Interest, Ability, and Value.

*If the student indicates more than one job, then ask:

WHICH JOB WOULD YOU LIKE BEST?

Circle the student's response on the Record Sheet.

(If the student cannot decide which job he likes best, the interviewer will pick one and star that job.)

3. Interest, Ability, and Value

WHY WOULD THIS KIND OF WORK BE INTERESTING TO YOU?

Record the student's response(s) on the Record Sheet.

*If the student cannot indicate his interest(s) that the job might satisfy, then say:

A PERSON MAY CHOOSE TO BE A NURSE, BECAUSE SHE LIKES TO HELP PEOPLE. CAN YOU TELL WHY YOU WOULD LIKE TO BE A ______________________?
(first job preference)

Record the student's response(s) on the Record Sheet.

Then ask:

WHAT THINGS CAN YOU DO WELL THAT WOULD HELP YOU BE A GOOD ______________________.
(first job preference)

Record the student's response(s) on the Record Sheet.

Then say:

TELL ME THE THINGS THAT ARE IMPORTANT TO YOU WHEN YOU CHOOSE A JOB.

Record the student's response(s) on the Record Sheet.

WOULD THE JOB OF A __________________ GIVE YOU THESE
(first job preference)
IMPORTANT THINGS? WHY?

Record the student's response(s) on the Record Sheet.

4. Information Sources

WHERE COULD YOU GET MORE INFORMATION ABOUT THIS KIND OF WORK?

Record the student's response(s) on the Record Sheet.

5. Education Required for Occupational Preference

WHAT EDUCATION OR TRAINING DO YOU THINK YOU WOULD NEED TO PREPARE YOU FOR THIS KIND OF WORK?

Record the student's response(s) on the Record Sheet.

APPENDIX Q

Scoring Procedures for Part IV
Junior High Section
Occupational Development Inventory

In scoring Part IV of the Junior High Section of the Occupational Development Inventory it is important to take into consideration the relative unsophistication of the learner. Students responding to these sections come from the seventh and ninth grades. The grammatical expertise of the students being interviewed and the spelling accuracy of the interviewers should not be a consideration in the scoring. The interviews attempted to measure the students' achievement of certain objectives, not the students' verbal ability.

Please write all of your scores for the sections of the interview described here on the scoring sheet provided. Make sure that the label on the scoring sheet corresponds to the student sheet you are scoring. Now you may begin to score Part IV-Occupational Planning.

Section 1 - Reasons for working

This section attempts to gather information on two objectives. Students must identify personal needs which are met through work (e.g., material needs, need for creativity), and students must identify the value of work in terms of societal goals (e.g., understand that work is necessary to produce and distribute goods and services people want).

Scoring: Unlike the elementary level interview, responses in this section concering personal reasons for work and the value of work to society will be scored separately. First, score the responses related to personal reasons in the following manner:

0 = no response, or non-relevant answer

1,2,... = number of relevant answers

Next, score the responses related to why work is important to society, using the same scoring scheme. Students who give multiple answers that are essentially the same should be given a score of 1.

Section 2 - Tentative occupational preference (s)

A judgement will be made as to whether or not the student's occupational choice matches or falls into his chosen cluster. The chosen cluster is listed in the box in the middle of page 1 of the Record Sheet. If more than one cluster is listed, the circled or starred one is the chosen cluster. The student's occupational choice is listed in the third box on page 1. If more than one job is listed, the circled or starred one is his or her occupational choice. If there is no occupation listed or if several are listed but none are designated (starred or circled) as the chosen work or cluster listed, then do not score this section nor the remainder of the interview. Score the occupational choice in the following manner:

0 = choice not in cluster

1 = choice in cluster

To assist the judge in making this decision, the booklet, Ten-Cluster Classification of Occupations, will be made available. This booklet has classified thousands of job names under the ten-cluster system. However, it is conceivable that the chosen occupation listed by the student will not be listed in the booklet. In this case, the judge will decide if the occupation is accurately described by the common thread of the chosen cluster.

Now turn to the second page of the Interview Record Sheet.

Section 3 - Interest, ability, and value

a) The student's reason(s) for being interested in his chosen work can be found in the box at the top of the page. Reasons should be scored in terms of the level of conceptualization expressed in the responses. The following scoring scheme will be used in scoring responses:

0 = no reason, completely irrelevant response, doesn't know

1 = it's fun, it looks like fun, it makes you feel good, thinks it would be nice

2 = modeling someone else; i.e., a friend, an aunt, an uncle, a parent, a sibling, a hero figure

3 = pragmatic reasons; fulfilling basic needs (i.e., the need for good, clothing, and shelter, physiological needs, social needs) or self and others

4 = fulfilling self (but on a higher level than basic needs); i.e., for good of man, selfactualization, strongly related to work values or interests of those in that field

If the student provides several responses that could receive different scores, the responses yielding the highest score should be used as the score for this section.

b) The student's reason(s) why he would be good at his chosen work are listed in the second box on the page. Responses will be scored in the following manner;

0 = no response, doesn't know why, answer not relevant

1 = likes it, or general liking category

2 = vicarious experience

3 = direct experience, or learning to do it

Again,the response(s) yielding the highest score should be used to determine the student's score for this section.

c) Important factors in choosing a job and whether or not the student's chosen occupation will provide these important things, will be scored as a unit. In scoring this part, use the response(s) in the last box on the page. Use the following scoring scheme:

0 = a "no" answer, or a "yes" answer with no rationale or an illogical rationale

1,2,3,... = number of logical reasons supporting his answer that his chosen occupation will provide the things he considers important when he chooses a job

Now turn to the third page of the Record Sheet.

Section 4 - Information sources

Students are supposed to list sources of additional information about their chosen occupation. The following scheme will be used in scoring this section:

0 = no response, or an inaccurate or irrelevant source

1,2,3,... = number of accurate or relevant sources of information

Section 5 - Education required for occupational preference

Students must indicate their knowledge of the minimum level of education needed for their chosen occupation. The following scheme will be used in scoring this section:

0 = no response, minimum level of education set too low (e.g., a high school education education to become a medical doctor)

1 = accurate response, at least the minimum education requirements mentioned (e.g., medical school for an M.D.)

APPENDIX R
RECORD SHEET
OCCUPATIONAL DEVELOPMENT INVENTORY — JUNIOR HIGH LEVEL
Part IV: Occupational Planning

Student's Name________________________ Grade Level________________________

School District________________________ School Building________________________

Interviewer________________________ Date________________________

RECORD ANSWERS FOR ALL SECTIONS OF PART IV ON THIS SHEET.

Section 1 — Reasons for Working

List the reason(s) for working the student gave.

Personal Reasons:
1.
2.
3.
4.

Societal Reasons:
1.
2.
3.
4.

Section 2 — Tentative Occupational Preference(s)

List the cluster(s) the student selected or the kind of work the student indicated he would like to do.

1.
2.
3.

Circle the one cluster the student liked best.

Star the one cluster selected by the interviewer if the student was unable to decide which one he liked best.

List the job(s) the student selected.

1.
2.
3.

Circle the one job the student liked best.

Star the one job selected by the interviewer if the student was unable to decide which one he liked best.

Section 3 — Interest, Ability, and Value

List the reason(s) the student gave for being interested in the chosen (circled or starred) kind of work.

1.
2.
3.

List the student's reason(s) why he would be good at the chosen (circled or starred) kind of work.

1.
2.
3.

List the things the student considers important when he chooses a job.

1.
2.
3.

Record the student's response "yes" or "no" and his rationale.

Yes ☐ No ☐	1. 2. 3.

Section 4 — Information Sources

List the sources the student named for getting more information about this kind of work.

1.
2.
3.

Section 5 — Education Required for Occupational Preference

List the education or training the student said was needed to prepare for his chosen kind of work.

1.
2.
3.

If you have any comments regarding this student, make them in the space below:

APPENDIX S

SCORE SHEET — OCCUPATIONAL DEVELOPMENT INVENTORY — JUNIOR HIGH LEVEL

Part IV: Occupational Planning

Date ____________________

Name of Rater

____

Level

____

Class Identification

____

Student Identification	Section 1 Personal Reasons	Section 1 Societal Reasons	Section 2 Choice in Cluster	Section 3 Reasons for Interest	Section 3 Ability to do Work	Section 3 Satisfying Work Values	Section 4 Information Sources	Section 5 Education Required

APPENDIX T

SENIOR HIGH
LEVEL

OCCUPATIONAL DEVELOPMENT INVENTORY

Part I
Occupational Knowledge

☐ BOY ☐ GIRL

NAME LAST FIRST MIDDLE

TEACHER

SCHOOL

DISTRICT

GRADE

DATE

Prepared by the staff of the Evaluation and Testing Department

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Susan Detienne **Pamela Kuzma**

Consultants: Dr. John B. Carroll; Dr. J. Thomas Hastings; Mr. Louis A. McElroy; Dr. Donald E. Super; Dr. Ralph W. Tyler; Dr. Bert W. Westbrook

EDUCATIONAL RESEARCH COUNCIL
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CLEVELAND, OHIO
April, 1973

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Occupational Development Inventory — Senior High Level

Part I: Occupational Knowledge

This is not a test. It is to find out how you feel about work. The results will be used to help you become better prepared for work in the future. You are not expected to know the answer to every question; do the best you can.

Occupational Development Inventory — Senior High Level
Part I: Occupational Knowledge

Section 1 — Common Thread

---

a. People work at many different jobs. Some of these jobs have something in common and can be grouped together.

Three of these groups are called Health and Personal Services, Protective Services, and Communications.

Health and Personal Services

People with these kinds of jobs take care of and improve the personal appearance, health, food, and general well-being of people or animals.

Protective Services

People with these kinds of jobs protect people and what they own.

Communications

People with these kinds of jobs present ideas and information to other people.

Mark an "X" in the box under the group that you think each job belongs to. If you think a job belongs to none of these groups, mark an "X" in the box under None of These.

EXAMPLE If you think "policeman" belongs to the group Protective Services, you would mark the box like this:

	Health and Personal Services	Protective Services	Communications	None of These
Policeman	☐	☒	☐	☐

	Health and Personal Services	Protective Services	Communications	None of These
(1) radio announcer	☐	☐	☐	☐
(2) social worker	☐	☐	☐	☐
(3) military serviceman	☐	☐	☐	☐
(4) surgeon	☐	☐	☐	☐
(5) judge	☐	☐	☐	☐
(6) fire inspector	☐	☐	☐	☐
(7) school counselor	☐	☐	☐	☐
(8) editor	☐	☐	☐	☐

b. Another three groups of jobs are Building Construction and Maintenance, Marine Industry, and Mechanics and Metal Working.

Building Construction and Maintenance

People with these kinds of jobs build and take care of buildings, bridges, highways, and other structures.

Marine Industry

People with these kinds of jobs build, operate, and take care of ships and boats.

Mechanics and Metal Working

People with these kinds of jobs work with metals and plastics. They also use and repair tools and machines.

Mark an "X" in the box under the group that you think each job belongs to. If you think a job belongs to none of these groups, mark an "X" in the box under None of These.

	Building Construction and Maintenance	Marine Industry	Mechanics and Metal Working	None of These
(9) plumber	☐	☐	☐	☐
(10) foundry worker	☐	☐	☐	☐
(11) sheetmetal worker	☐	☐	☐	☐
(12) building manager	☐	☐	☐	☐
(13) highway engineer	☐	☐	☐	☐
(14) aircraft mechanic	☐	☐	☐	☐
[illegible]) marine engineer	☐	☐	☐	☐
(16) longshoreman	☐	☐	☐	☐

c. Four more groups of jobs are Business and Commerce, Textiles and Leather, Special Technologies, and Extractive Industries.

Business and Commerce
People with these kinds of jobs promote sales, distribute goods or services, keep accounts, and make reports.

Textiles and Leather
People with these kinds of jobs design, make, and take care of products made from fabrics, fur, and leather.

Special Technologies
People with these kinds of jobs use the knowledge of science, mathematics, and mechanical devices.

Extractive Industries
People with these kinds of jobs study or make products from the natural resources of the earth.

Mark an "X" in the box under the group that you think each job belongs to. If you think a job belongs to none of these groups, mark an "X" in the box under None of These.

		Business and Commerce	Textiles and Leather	Special Technologies	Extractive Industries	None of These
(17)	weaver	☐	☐	☐	☐	☐
(18)	nurseryman	☐	☐	☐	☐	☐
(19)	buyer	☐	☐	☐	☐	☐
(20)	hotel manager	☐	☐	☐	☐	☐
(21)	research electrician	☐	☐	☐	☐	☐
(22)	bank teller	☐	☐	☐	☐	☐
(23)	forester	☐	☐	☐	☐	☐
(24)	dress designer	☐	☐	☐	☐	☐
(25)	electronic engineer	☐	☐	☐	☐	☐
(26)	agricultural scientist	☐	☐	☐	☐	☐

Section 2 — Education and Training

Different jobs require different education or training. Mark an "X" in the box that tells what kind of education or training is usually necessary for each job listed below.

EXAMPLE If you think a historian usually needs a college education, mark the box like this:

	High School Education	Technical Training	College Education
historian	☐	☐	☒

	High School Education	Technical Training	College Education
(27) television repairman	☐	☐	☐
(28) electrician	☐	☐	☐
(29) stock boy	☐	☐	☐
(30) high school teacher	☐	☐	☐
(31) office clerk	☐	☐	☐
(32) plumber	☐	☐	☐
(33) chemical engineer	☐	☐	☐
(34) banker	☐	☐	☐
(35) cashier	☐	☐	☐
(36) receptionist	☐	☐	☐

Section 3 — Determinants and Trends of Employment Opportunities

There are many things that influence the demand for workers in various jobs. Read each of the following statements. Mark an "X" in the box under True, False, or Not Sure for each statement.

True — means you think the statement is true.

False — means you think the statement is false.

Not Sure — means you cannot decide if the statement is true or false.

	True	False	Not Sure
(37) It is easier to get a job when you have a special skill.	☐	☐	☐
(38) Job opportunities in rural and urban areas are the same.	☐	☐	☐
(39) There will be more professional and service jobs in the future.	☐	☐	☐
(40) If there is a big demand for doctors, this means that there are too many doctors.	☐	☐	☐
(41) Taking care of problems, like pollution, can create new jobs.	☐	☐	☐
(42) If the birth rate goes down, we will need more teachers.	☐	☐	☐
(43) In the United States, more people work on farms than in industries.	☐	☐	☐
(44) New machinery gets rid of some old jobs and creates some new jobs.	☐	☐	☐

Section 4 — Life Style

A person's job influences the way he lives. Circle the job that usually has each of the following effects on a person's life.

EXAMPLE The job "Farmer" is circled because a farmer usually works outdoors.

Effect	Job			
Works outdoors	Cashier	Barber	[✓ Farmer]	Secretary

	Effect	Job			
(45)	be away from home at night	Entertainer	Bankteller	Electrician	Gardener
(46)	have danger	Author	Sales clerk	Detective	Maid
(47)	earn a lot of money	Law clerk	Lawyer	Jail warden	Policeman
(48)	travel a lot	Typist	Telephone operator	Truck driver	Chemist
(49)	have regular daytime working hours	Bank manager	Nurse	Fireman	Airline pilot
(50)	be employed nine months out of each year	Cook	Postmaster	Minister	Professor

APPENDIX U
OCCUPATIONAL DEVELOPMENT INVENTORY

Senior High Level

Part I: Occupational Knowledge

DIRECTIONS FOR ADMINISTERING

Prepared by the staff of the Evaluation and Testing Department

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Educational Research Council of America

April, 1973

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Occupational Development Inventory (ODI) — Senior High Level
Part I: Occupational Knowledge

General Directions

Directions which appear in capitals are to be read aloud by the teacher. Directions in lower case are for the teacher only.

Directions for Administering ODI — Part I

> I AM GOING TO GIVE EACH OF YOU A BOOKLET. DO NOT OPEN IT OR WRITE ON IT UNTIL I TELL YOU TO.

Give each student a booklet.

> PRINT YOUR NAME ON THE LINE NEXT TO THE WORD "NAME."

Give directions for filling in other identifying information in the box on the cover.

> NOW TURN TO THE FIRST PAGE AND READ THE DIRECTIONS TO YOURSELF AS I READ THEM ALOUD.

> "THIS IS NOT A TEST. IT IS TO FIND OUT HOW MUCH YOU KNOW ABOUT WORK. THE RESULTS WILL BE USED TO HELP YOU BECOME BETTER PREPARED FOR WORK IN THE FUTURE. YOU ARE NOT EXPECTED TO KNOW THE ANSWER TO EVERY QUESTION; DO THE BEST YOU CAN."

Section 1 — Common Thread

> NOW TURN TO PAGE 2 AND READ THE INSTRUCTIONS TO YOURSELF AS I READ THEM ALOUD. "PEOPLE WORK AT MANY DIFFERENT JOBS. SOME OF THESE JOBS HAVE SOMETHING IN COMMON AND CAN BE GROUPED TOGETHER. THREE OF THESE GROUPS ARE CALLED HEALTH AND PERSONAL SERVICES, PROTECTIVE SERVICES, AND COMMUNICATIONS."

Read the definition of each group to the students.

"HEALTH AND PERSONAL SERVICES — PEOPLE WITH THESE KINDS OF JOBS TAKE CARE OF AND IMPROVE THE PERSONAL APPEARANCE, HEALTH, FOOD, AND GENERAL WELL-BEING OF PEOPLE OR ANIMALS.

PROTECTIVE SERVICES — PEOPLE WITH THESE KINDS OF JOBS PROTECT PEOPLE AND WHAT THEY OWN.

COMMUNICATIONS — PEOPLE WITH THESE KINDS OF JOBS PRESENT IDEAS AND INFORMATION TO OTHER PEOPLE.

MARK AN 'X' IN THE BOX UNDER THE GROUP THAT YOU THINK EACH JOB BELONGS TO. IF YOU THINK A JOB BELONGS TO NONE OF THESE GROUPS, MARK AN 'X' IN THE BOX UNDER NONE OF THESE."

NOW LOOK AT THE EXAMPLE. IF YOU THINK "POLICEMAN" BELONGS TO THE GROUP PROTECTIVE SERVICES, YOU WOULD MARK THE BOX AS IT IS DONE IN THE EXAMPLE.

Demonstrate the marking procedure on the chalk board.

NOW YOU MAY BEGIN.

If necessary, repeat the definition of each group. Job names may be read aloud if the teacher feels that the students will have difficulty reading them.

When all students have finished Page 2, ask them to turn to Page 3 and say:

"ANOTHER THREE GROUPS OF JOBS ARE BUILDING CONSTRUCTION AND MAINTENANCE, MARINE INDUSTRY, AND MECHANICS AND METAL WORKING."

Read the definition of each group to the students.

"BUILDING CONSTRUCTION AND MAINTENANCE — PEOPLE WITH THESE KINDS OF JOBS BUILD AND TAKE CARE OF BUILDINGS, BRIDGES, HIGHWAYS, AND OTHER STRUCTURES.

MARINE INDUSTRY — PEOPLE WITH THESE KINDS OF JOBS BUILD, OPERATE, AND TAKE CARE OF SHIPS AND BOATS.

MECHANICS AND METAL WORKING — PEOPLE WITH THESE KINDS OF JOBS WORK WITH METALS AND PLASTICS. THEY ALSO USE AND REPAIR TOOLS AND MACHINES.

MARK AN 'X' IN THE BOX UNDER THE GROUP THAT YOU THINK EACH JOB BELONGS TO. IF YOU THINK A JOB BELONGS TO NONE OF THESE GROUPS, MARK AN 'X' IN THE BOX UNDER NONE OF THESE."

NOW BEGIN.

If necessary, repeat the definition of each group. Job names may be read aloud if the teacher feels that the students will have difficulty reading them.

When all the students have finished Page 3, ask them to turn to Page 4 and say:

"FOUR MORE GROUPS OF JOBS ARE BUSINESS AND COMMERCE, TEXTILES AND LEATHER, SPECIAL TECHNOLOGIES, AND EXTRACTIVE INDUSTRIES."

Read the definition of each group to the students.

"BUSINESS AND COMMERCE — PEOPLE WITH THESE KINDS OF JOBS PROMOTE SALES, DISTRIBUTE GOODS OR SERVICES, KEEP ACCOUNTS, AND MAKE REPORTS.

TEXTILES AND LEATHER — PEOPLE WITH THESE KINDS OF JOBS DESIGN, MAKE, AND TAKE CARE OF PRODUCTS MADE FROM FABRICS, FUR, AND LEATHER.

SPECIAL TECHNOLOGIES — PEOPLE WITH THESE KINDS OF JOBS USE THE KNOWLEDGE OF SCIENCE, MATHEMATICS, AND MECHANICAL DEVICES.

EXTRACTIVE INDUSTRIES — PEOPLE WITH THESE KINDS OF JOBS STUDY OR MAKE PRODUCTS FROM THE NATURAL RESOURCES OF THE EARTH.

MARK AN 'X' IN THE BOX UNDER THE GROUP THAT YOU THINK EACH JOB BELONGS TO. IF YOU THINK A JOB BELONGS TO NONE OF THESE GROUPS, MARK AN 'X' IN THE BOX UNDER NONE OF THESE."

NOW BEGIN.

If necessary, repeat the definition of each group, and read the names of the jobs.

Section 2 — Education and Training

When all the students have completed Page 4, ask them to turn to Page 5 and say:

"DIFFERENT JOBS REQUIRE DIFFERENT EDUCATION OR TRAINING.

MARK AN 'X' IN THE BOX THAT TELLS WHAT KIND OF EDUCATION OR TRAINING IS USUALLY NECESSARY FOR EACH JOB LISTED BELOW."

NOW LOOK AT THE EXAMPLE. IF YOU THINK A HISTORIAN USUALLY NEEDS A COLLEGE EDUCATION, YOU WOULD MARK THE BOX AS IT IS DONE IN THE EXAMPLE.

Demonstrate the marking procedure on the chalk board if necessary.

NOW BEGIN.

Job names may be read aloud if the teacher feels the students would have difficulty reading them.

Section 3 — Determinants and Trends of Employment Opportunities

When all the students have completed Page 5, ask them to turn to Page 6 and say:

"THERE ARE MANY THINGS THAT INFLUENCE THE DEMAND FOR WORKERS IN VARIOUS JOBS. READ EACH OF THE FOLLOWING STATEMENTS. MARK AN 'X' IN THE BOX UNDER TRUE, FALSE, OR NOT SURE FOR EACH STATEMENT.

TRUE MEANS YOU THINK THE STATEMENT IS TRUE.
FALSE MEANS YOU THINK THE STATEMENT IS FALSE.
NOT SURE MEANS YOU CANNOT DECIDE IF THE STATEMENT IS TRUE OR FALSE."

ARE THERE ANY QUESTIONS?

Answer any questions the students may have, then say:

YOU MAY BEGIN.

Section 4 — Life Style

When all the students have finished Page 6, ask them to turn to Page 7 and say:

> "A PERSON'S JOB INFLUENCES THE WAY HE LIVES. CIRCLE THE JOB THAT USUALLY HAS EACH OF THE FOLLOWING EFFECTS ON A PERSON'S LIFE."
>
> NOW LOOK AT THE EXAMPLE. THE JOB "FARMER" IS CIRCLED BECAUSE A FARMER USUALLY WORKS OUTDOORS.
>
> ARE THERE ANY QUESTIONS?

Answer any questions the students may have and then say:

> NOW BEGIN.

When all the students have completed this page, collect the booklets.

APPENDIX V

SENIOR HIGH

LEVEL

OCCUPATIONAL DEVELOPMENT INVENTORY

Part II

Occupational Vocabulary

NAME LAST FIRST MIDDLE ☐ BOY ☐ GIRL

TEACHER

SCHOOL DISTRICT

GRADE DATE

Prepared by the staff of the Evaluation and Testing Department

Wai-Ching Ho **William McCook**
Susan Detienne **Pamela Kuzma**

Consultants: Dr. John B. Carroll; Dr. J. Thomas Hastings; Mr. Louis A. McElroy; Dr. Donald E. Super; Dr. Ralph W. Tyler; Dr. Bert W. Westbrook

EDUCATIONAL RESEARCH COUNCIL
OF AMERICA
CLEVELAND, OHIO
April, 1973

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Occupational Development Inventory — Senior High Level
Part II: Occupational Vocabulary

Directions:

Read each problem.
Choose the best answer to fill in the blank.
Circle the letter beside the answer you choose.
Do not write in the blank.

Sample:

Another word for labor is______.

a. play
[✓ b.] work
c. rest
d. dream

1. All the employees of a company are its______.

a. executives
b. management
c. share holders
d. personnel

2. Usually no special training is required to obtain______.

a. a skilled job
b. a technical job
c. an unskilled job
d. a professional job

3. George is working for a carpenter to learn the trade. George is______.

a. a master tradesman
b. a journeyman
c. a clerk
d. an apprentice

4. Money taken from a salary for government expenses is______.

a. an income tax
b. a minimum wage
c. a bonus
d. a pension

5. Using machines to operate elevators is an example of______.

a. service work
b. work force
c. automation
d. manual labor

6. The summary of a person's work experience and education is______.

a. a recommendation
b. a diploma
c. a dissertation
d. a resumé

7. A building manager is an example of an occupation in______.

a. office work
b. mechanics
c. personal services
d. custodial services

8. If you own your own business, you are______.
   a. a consumer
   b. a proprietor
   c. a customer
   d. a client

9. Protection of natural resources is called______.
   a. conservation
   b. biology
   c. reservation
   d. zoology

10. If you are looking for a job, you should read the______.
   a. encyclopedia
   b. want ads
   c. Reader's Digest
   d. college catalogues

11. People who grow crops or raise livestock have jobs in______.
   a. meteorology
   b. veterinary science
   c. fur farming
   d. agriculture

12. A legal agreement between two parties is called______.
   a. a license
   b. a contract
   c. a permit
   d. a subpoena

13. An institution that trains you in specific job skills is a______.
   a. vocational school
   b. nursery
   c. preparatory school
   d. liberal arts college

14. The interchange of goods and services is called______.
   a. the gross national product
   b. capitalism
   c. commerce
   d. communication

15. To get a government job, you usually have to ______.
   a. pass a civil service examination
   b. join a labor union
   c. pass a college board test
   d. join a professional society

16. Writing, drawing, and printing are called______.

    a. performing arts
    b. graphic arts
    c. physical sciences
    d. natural sciences

17. The word______means that a business has been dissolved in order to pay its debts.

    a. equity
    b. asset
    c. balance
    d. bankruptcy

18. The fiscal year includes the period of______.

    a. January 1 through December 31
    b. July 1 through June 30 of the following year
    c. April 16 through April 15 of the following year
    d. September 1 through August 31 of the following year

19. The AFL-CIO is______.

    a. a national labor union
    b. an employment agency
    c. a social welfare department
    d. a national intelligence agency

20. The term F.I.C.A. refers to______.

    a. Internal Revenue Service
    b. Welfare
    c. Social Security
    d. Workmen's Compensation

APPENDIX W
OCCUPATIONAL DEVELOPMENT INVENTORY

Senior High Level

Part II: Occupational Vocabulary

DIRECTIONS FOR ADMINISTERING

Prepared by the staff of the Evaluation and Testing Department

Wai-Ching Ho
Pamela Kuzma
William McCook
Susan Detienne

Educational Research Council of America
April, 1973

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Occupational Development Inventory (ODI) — Senior High Level

Part II: Occupational Vocabulary

General Directions

Directions which appear in capitals are to be read aloud by the teacher. Directions in lower case are for the teacher only.

Directions for Administering ODI — Part II

I AM GOING TO GIVE EACH OF YOU A BOOKLET. DO NOT OPEN IT OR WRITE ON IT UNTIL I TELL YOU TO.

Give each student a booklet.

PRINT YOUR NAME ON THE LINE NEXT TO THE WORD "NAME."

Give directions for filling in other identifying information in the box on the cover.

NOW TURN TO THE FIRST PAGE. READ THE DIRECTIONS TO YOURSELF AS I READ THEM ALOUD.

"READ EACH PROBLEM. CHOOSE THE BEST ANSWER TO FILL IN THE BLANK. CIRCLE THE LETTER BESIDE THE ANSWER YOU CHOOSE. DO NOT WRITE IN THE BLANK."

NOW LOOK AT THE SAMPLE PROBLEM.

Read the sample problem and the four possible answers aloud.

THE ANSWER IS "WORK", SO A CIRCLE IS DRAWN AROUND THE LETTER BESIDE THE WORD "WORK."

Demonstrate the marking system on the chalk board.

ARE THERE ANY QUESTIONS?

Discuss any questions the students may have, making sure each student understands the marking procedure.

NOW, YOU MAY BEGIN.

If the teacher believes the students may have difficulty reading the problems, he should read each problem aloud.

Allow time for the students to attempt each problem, then say:

CLOSE YOUR BOOKLET.

Collect the booklets immediately.

APPENDIX X

SENIOR HIGH
LEVEL

OCCUPATIONAL DEVELOPMENT INVENTORY

Part III
Occupational Interest, Attitude, and Value

NAME LAST FIRST MIDDLE ☐ BOY ☐ GIRL

TEACHER

SCHOOL DISTRICT

GRADE DATE

Prepared by the staff of the Evaluation and Testing Department

Wai-Ching Ho
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Occupational Development Inventory — Senior High Level

Part III: Occupational Interest, Attitude, and Value

This is not a test. It is to find out how you feel about school subjects, about work, and about yourself. There are no right or wrong answers. Each answer should be what is true for you.

The results will be used to help you become better prepared for work in the future.

Occupational Development Inventory -- Senior High Level
Part III: Occupational Interest, Attitude, and Value

[illegible]ction 1 — School Subject

In this section, please indicate how well you think you are doing in each school subject. Mark an "X" in the box under Below Average, Average, Above Average, or Have Not Taken that is true for you.

Below Average	—	means you believe that you are not doing as well as most of your classmates.
Average	—	means you believe that you are doing as well as most of your classmates.
Above Average	—	means you believe that you are doing better than most of your classmates.
Have Not Taken	—	means you have not taken that school subject.

EXAMPLE If you think you are doing better than most of your classmates in math, mark the box like this:

	Below Average	Average	Above Average	Have Not Taken
Math	☐	☐	☒	☐

	Below Average	Average	Above Average	Have Not Taken
1. Math	☐	☐	☐	☐
2. English	☐	☐	☐	☐
3. Art	☐	☐	☐	☐
4. Music	☐	☐	☐	☐
5. Science	☐	☐	☐	☐
6. Social Studies	☐	☐	☐	☐
7. Foreign Language	☐	☐	☐	☐
8. Gym	☐	☐	☐	☐
9. Home Economics	☐	☐	☐	☐
10. Shop	☐	☐	☐	☐
11. Health	☐	☐	☐	☐

Section 2 — Interest

a) This section is to find out how much you like or do not like each school subject. Mark an "X" in the box under Do Not Like, Not Sure, Like, or Have Not Taken that is true for you.

Do Not Like — means you do not like the school subject.

Not Sure — means you cannot decide whether you like the school subject or not.

Like — means you like the school subject.

Have Not Taken — means you have not taken that school subject.

EXAMPLE If you cannot decide whether you like science or not, mark the box like this:

	Do Not Like	Not Sure	Like	Have Not Taken
Science	☐	☒	☐	☐

	Do Not Like	Not Sure	Like	Have Not Taken
12. Math	☐	☐	☐	☐
13. English	☐	☐	☐	☐
14. Art	☐	☐	☐	☐
15. Music	☐	☐	☐	☐
16. Science	☐	☐	☐	☐
17. Social Studies	☐	☐	☐	☐
18. Foreign Language	☐	☐	☐	☐
19. Gym	☐	☐	☐	☐
20. Home Economics	☐	☐	☐	☐
21. Shop	☐	☐	☐	☐
22. Health	☐	☐	☐	☐

b) List three of the activities you like to do when you have free time.

23. ____________ 24. ____________ 25. ____________

c) Below is a list of activities and explanations of what they mean. Mark the boxes which show how much you like doing the following activities:

	Do Not Like	Not Sure	Like
26. Physical Activities — means you like to play sports, enjoy doing work that involves using your hands and physical strength.	☐	☐	☐
27. Mental Activities — means you like to think through and solve problems.	☐	☐	☐
28. Outdoor Activities — means you like to work outdoors. You like to work with animals. You like to plant and grow things.	☐	☐	☐
29. Working with People — means you like to spend most of your time working or playing with people. You would like teaching or training people. You enjoy getting to know people.	☐	☐	☐
30. Working with Data — means you like to collect information (data), make measurements, record information, and make judgments about the information you collected.	☐	☐	☐
31. Working with Things — means you like to make or work with objects. You like to work with your hands. You like to operate, adjust, or repair tools and machines.	☐	☐	☐

Section 3 — Attitude and Value

a) This section is to find out what you think is true about you. Here is what the possible answers mean.

Not Like me — means the statement is usually not true about you.

Like me — means the statement is usually true about you.

EXAMPLE If the statement below is usually true about you, mark the box like this:

	Not Like me	Like me
I do well in school.	☐	☒

Mark an "X" in the box which most accurately describes you.

	Not Like me	Like me
32. I wish I could have a better occupation than the one I will probably choose.	☐	☐
33. I get along well with people.	☐	☐
34. I feel good luck is more important than hard work for success.	☐	☐
35. I wish that I were more sure of myself.	☐	☐
36. I am good at activities that require operating, adjusting, or repairing tools and machines.	☐	☐
37. If I work hard, I usually succeed.	☐	☐
38. No matter how hard I work, I don't get the breaks I need to get ahead.	☐	☐
9. I can make measurements and record information accurately.	☐	☐

		Not Like me	Like me
40.	I am good at working with my hands.	☐	☐
41.	I have the ability to make meaningful decisions based upon information that I have obtained.	☐	☐
42.	I do not think my future occupation will be important to society.	☐	☐
43.	I feel that I have the ability to do things as well as most people my age.	☐	☐
44.	I would be good at teaching and training people.	☐	☐
45.	I am happy with myself most of the time.	☐	☐
46.	I am sure I will enjoy the occupation I choose.	☐	☐
47.	It is easy for me to get to know people.	☐	☐
48.	I am good at collecting and examining information.	☐	☐
49.	I believe people will think highly of my future occupation.	☐	☐

b) This section is to find out what you think is true about relationships between people who work together, and your feelings about work. Mark an "X" in the box under Do Not Agree, Not Sure, or Agree that shows your true feeling for each statement.

Do Not Agree — means you believe the statement is not true.

Not Sure — means you cannot decide whether the statement is true or not.

Agree — means you believe the statement is true.

	Do Not Agree	Not Sure	Agree
50. A person should have education and training that will prepare him for more than one occupation.	☐	☐	☐
51. In order to make oneself look good, one should speak badly of those people around him.	☐	☐	☐
52. All honest jobs, such as doctors and garbage collectors, are valuable to everyone.	☐	☐	☐
53. If a person wants to be successful, he should not share his knowledge and skills with other people.	☐	☐	☐
54. A person can seldom change his occupation once he makes his choice.	☐	☐	☐
55. Work experience and further education usually enable a person to advance to better jobs.	☐	☐	☐
56. People with high paying jobs should get more respect than those who are paid very little.	☐	☐	☐

	Do Not Agree	Not Sure	Agree
57. Manual work is of less value than mental work.	☐	☐	☐
58. One should praise other people when they do something well.	☐	☐	☐
59. Getting along with other people is not important for a person's success.	☐	☐	☐
60. Everyone who works honestly for a living should be proud of himself.	☐	☐	☐
61. A person can only be trained for one job.	☐	☐	☐
62. If you are nice to people, they will take advantage of you.	☐	☐	☐
63. People should work well together to get jobs done.	☐	☐	☐

c) This section is to find out what will be important to you when you choose a job. Mark an "X" in the box under Not Important, Somewhat Important, or Very Important that shows how important each of the following is to you in selecting a job.

		Not Important	Somewhat Important	Very Important
64.	Help other people	☐	☐	☐
65.	Make a lot of money	☐	☐	☐
66.	Be looked up to by other people	☐	☐	☐
67.	Collect and examine information	☐	☐	☐
68.	Seldom be laid off	☐	☐	☐
69.	Have an opportunity to get ahead	☐	☐	☐
70.	Tell people what to do	☐	☐	☐
71.	Think up new ways of doing things	☐	☐	☐
72.	Make own decisions	☐	☐	☐
73.	Make objects and use tools and machinery	☐	☐	☐
74.	Get recognition for good work	☐	☐	☐
75.	Work in a clean and nice place	☐	☐	☐
76.	Get along with coworkers	☐	☐	☐
77.	Need to solve new problems frequently	☐	☐	☐
78.	Do the same routine work	☐	☐	☐
79.	Have regular daytime working hours	☐	☐	☐
80.	Be able to take pride in the work	☐	☐	☐
81.	Be interested in the work	☐	☐	☐
82.	Make use of own special talents	☐	☐	☐
83.	Work with people most of the time	☐	☐	☐

APPENDIX Y
OCCUPATIONAL DEVELOPMENT INVENTORY

Senior High Level

Part III: Occupational Interest, Attitude, and Value

DIRECTIONS FOR ADMINISTERING

Prepared by the staff of the Evaluation and Testing Department

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William McCook
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Educational Research Council of America

April, 1973

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Occupational Development Inventory (ODI) —Senior High Level
Part III: Occupational Interest, Attitude, and Value

General Directions

Directions which appear in capitals are to be read aloud by the teacher. Directions in lower case are for the teacher only.

Directions for Administering ODI — Part III

> I AM GOING TO GIVE EACH OF YOU A BOOKLET. DO NOT OPEN IT OR WRITE ON IT UNTIL I TELL YOU TO.

Give each student a booklet.

> PRINT YOUR NAME ON THE LINE NEXT TO THE WORD "NAME."

Give directions for filling in other identifying information in the box on the cover.

> NOW TURN TO THE FIRST PAGE AND READ THE DIRECTIONS TO YOURSELF AS I READ THEM ALOUD.
>
> "THIS IS NOT A TEST. IT IS TO FIND OUT HOW YOU FEEL ABOUT SCHOOL SUBJECTS, ABOUT WORK, AND ABOUT YOURSELF. THERE ARE NO RIGHT OR WRONG ANSWERS. EACH ANSWER SHOULD BE WHAT IS TRUE FOR YOU."
>
> "THE RESULTS WILL BE USED TO HELP YOU BECOME BETTER PREPARED FOR WORK IN THE FUTURE."

Section 1– School Subject

> NOW TURN TO PAGE 2 AND READ THE INSTRUCTIONS AS I READ THEM ALOUD. "IN THIS SECTION, PLEASE INDICATE HOW WELL YOU THINK YOU ARE DOING IN EACH SCHOOL SUBJECT. MARK AN 'X' IN THE BOX UNDER BELOW AVERAGE, AVERAGE, ABOVE AVERAGE, OR HAVE NOT TAKEN THAT IS TRUE FOR YOU."

HERE IS WHAT THE POSSIBLE ANSWERS MEAN.

"BELOW AVERAGE MEANS YOU BELIEVE THAT YOU ARE NOT DOING AS WELL AS MOST OF YOUR CLASSMATES. AVERAGE MEANS YOU BELIEVE THAT YOU ARE DOING AS WELL AS MOST OF YOUR CLASSMATES. ABOVE AVERAGE MEANS YOU BELIEVE THAT YOU ARE DOING BETTER THAN MOST OF YOUR CLASSMATES. HAVE NOT TAKEN MEANS YOU HAVE NOT TAKEN THAT SCHOOL SUBJECT."

NOW LOOK AT THE EXAMPLE. IF YOU THINK YOU ARE DOING BETTER THAN MOST OF YOUR CLASSMATES IN MATH, MARK THE BOX THE WAY IT IS DONE IN THIS EXAMPLE.

Demonstrate the marking method on the chalk board. Try another example if necessary.

ARE THERE ANY QUESTIONS?

Discuss any questions the students may have. Make sure each student understands the marking procedure before beginning.

NOW MARK THE BOX FOR EACH SCHOOL SUBJECT WHICH TELLS WHAT YOU THINK IS TRUE FOR YOU. REMEMBER, THE BEST ANSWER IS WHAT YOU THINK IS TRUE FOR YOU.

NOW, YOU MAY BEGIN.

Pause to allow time for their responses.

Section 2 — Interest

When Section 1 is completed, say:

NOW TURN TO PAGE 3.

THIS SECTION IS VERY MUCH LIKE THE ONE YOU JUST COMPLETED EXCEPT THAT THE ANSWERS HAVE A DIFFERENT MEANING.

READ THE INSTRUCTIONS AT THE TOP OF THE PAGE TO YOURSELF AS I READ THEM ALOUD. "THIS SECTION IS TO FIND OUT HOW MUCH YOU LIKE OR DO NOT LIKE EACH SCHOOL SUBJECT. MARK AN 'X' IN THE BOX UNDER DO NOT LIKE, NOT SURE, LIKE, OR HAVE NOT TAKEN THAT IS TRUE FOR YOU."

HERE IS WHAT THE POSSIBLE ANSWERS MEAN.

"DO NOT LIKE MEANS YOU DO NOT LIKE THE SCHOOL SUBJECT. NOT SURE MEANS YOU CANNOT DECIDE WHETHER YOU LIKE THE SCHOOL SUBJECT OR NOT. LIKE MEANS YOU LIKE THE SCHOOL SUBJECT. HAVE NOT TAKEN MEANS YOU HAVE NOT TAKEN THAT SCHOOL SUBJECT."

NOW LOOK AT THE EXAMPLE. IF YOU CANNOT DECIDE WHETHER YOU LIKE SCIENCE OR NOT, MARK THE BOX THE WAY IT IS DONE IN THIS EXAMPLE.

Demonstrate the marking method to the students if necessary.

ARE THERE ANY QUESTIONS?

Discuss any questions the students may have. Make sure each student understands the marking procedure.

NOW MARK HOW MUCH YOU LIKE OR DO NOT LIKE THE SCHOOL SUBJECTS ON THIS PAGE.

Pause to allow time for their responses.

When all students have completed Page 3, ask them to turn to Page 4.

NOW LIST THREE OF THE ACTIVITIES YOU LIKE TO DO WHEN YOU HAVE FREE TIME.

Allow time for the students to list the activities, then say:

READ THE NEXT INSTRUCTIONS TO YOURSELF AS I READ THEM ALOUD. "BELOW IS A LIST OF ACTIVITIES AND EXPLANATIONS OF WHAT THEY MEAN. MARK THE BOXES WHICH SHOW HOW MUCH YOU LIKE DOING THE FOLLOWING ACTIVITIES."

Read each activity and its explanation to the students. The students should respond as each activity is described. Reread the explanation of each activity if necessary.

Section 3 — Attitude and Value

After Section 2 is completed, say:

NOW TURN TO PAGE 5 AND READ THE INSTRUCTIONS TO YOURSELF AS I READ THEM ALOUD. "THIS SECTION IS TO FIND OUT WHAT YOU THINK IS TRUE ABOUT YOU. HERE IS WHAT THE POSSIBLE ANSWERS MEAN."

"NOT LIKE ME MEANS THE STATEMENT IS USUALLY NOT TRUE ABOUT YOU. LIKE ME MEANS THE STATEMENT IS USUALLY TRUE ABOUT YOU."

NOW LOOK AT THE EXAMPLE. IF THE STATEMENT BELOW IS USUALLY TRUE ABOUT YOU, YOU WOULD MARK THE BOX THE WAY IT IS DONE IN THIS EXAMPLE.

Demonstrate the marking method on the chalk board if necessary.

ARE THERE ANY QUESTIONS?

Discuss any questions the students may have. Make sure the students understand the marking procedure.

Read each problem to the students if necessary. Allow time for their responses.

When all students have completed Page 5, say:

NOW TURN TO PAGE 6 AND CONTINUE.

When all students have completed Page 6, say:

NOW TURN TO PAGE 7.

READ THE INSTRUCTIONS AT THE TOP OF THE PAGE TO YOURSELF AS I READ THEM ALOUD. "THIS SECTION IS TO FIND OUT WHAT YOU THINK IS TRUE ABOUT RELATIONSHIPS BETWEEN PEOPLE WHO WORK TOGETHER, AND YOUR FEELINGS ABOUT WORK. MARK AN 'X' IN THE BOX UNDER DO NOT AGREE, NOT SURE, OR AGREE THAT SHOWS YOUR TRUE FEELING FOR EACH STATEMENT." HERE IS WHAT THE POSSIBLE ANSWERS MEAN.

"DO NOT AGREE MEANS YOU BELIEVE THE STATEMENT IS NOT TRUE. NOT SURE MEANS YOU CANNOT DECIDE WHETHER THE STATEMENT IS TRUE OR NOT. AGREE MEANS YOU BELIEVE THE STATEMENT IS TRUE."

ARE THERE ANY QUESTIONS?

Discuss any questions the students may have. Then read each statement to the students making sure that they respond to each one.

When the students have completed Page 7, say:

TURN TO PAGE 8.

When all students have completed Page 8, say:

> NOW TURN TO PAGE 9.
>
> READ THE INSTRUCTIONS AT THE TOP OF THE PAGE TO YOURSELF AS I READ THEM ALOUD. "THIS SECTION IS TO FIND OUT WHAT WILL BE IMPORTANT TO YOU WHEN YOU CHOOSE A JOB. MARK AN 'X' IN THE BOX UNDER NOT IMPORTANT, SOMEWHAT IMPORTANT, OR VERY IMPORTANT THAT SHOWS HOW IMPORTANT EACH OF THE FOLLOWING IS TO YOU IN SELECTING A JOB."
>
> ARE THERE ANY QUESTIONS?

Discuss any questions the students may have.

Demonstrate the marking procedure on the chalk board if necessary. If the teacher feels that the students may have difficulty reading the problems, he should read them aloud.

Then say:

> PLEASE BEGIN. WHEN YOU HAVE FINISHED, CLOSE THE BOOKLET.

When all the students have completed Page 9, collect the booklets immediately.

APPENDIX Z

SENIOR HIGH
LEVEL

OCCUPATIONAL DEVELOPMENT INVENTORY

Part IV
Occupational Planning

(Interview Guide)

Prepared by the staff of the Evaluation and Testing Department

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EDUCATIONAL RESEARCH COUNCIL
OF AMERICA
CLEVELAND, OHIO

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Occupational Development Inventory — Senior High Level

Part IV: Occupational Planning

DIRECTIONS

In administering the Occupational Planning section of the Occupational Development Inventory, it is essential to first establish rapport with the student to encourage his cooperation and to successfully complete the interview. Establishing this rapport depends upon the judgment of the interviewer, taking into account the personality of the student and other relevant variables in the interview situation.

The room in which the interview will take place should be well lighted and quiet. It should contain a chair for the interviewer and one for the student.

When the student arrives for the interview, the interviewer should introduce himself and explain that the purpose of the interview is to find out each student's tentative occupational preferences, how much he knows about preparing for these occupations, and how much preparation he has made. This information will be used to help students become better prepared for work in the future.

The student identifying information that appears at the top of the Record Sheet should be filled in next. Student responses to all sections should be recorded on the Record Sheet. A tape should also be made of the entire interview. The interviewer will not be responsible for scoring the interview, and at no time should he indicate if the student has made a correct or incorrect response.

Occupational Development Inventory — Senior High Level
Part IV: Occupational Planning

Note: Directions typed in lower case are for the interviewer only and should not be read aloud. Directions typed all in capital letters are to be read aloud exactly as written, in a natural tone of voice.

When there are alternative directions to allow for different situations, these alternatives are marked with an asterisk (*). Greatest care should be taken not to frustrate the student.

1. Reasons for Working

PEOPLE WORK FOR MANY DIFFERENT REASONS. ONE REASON IS TO EARN MONEY. OTHER REASONS ARE PERSONAL AND DO NOT HAVE MUCH TO DO WITH OTHER PEOPLE. STILL OTHER REASONS HAVE TO DO WITH SOCIETY BECAUSE THE WORK IS NEEDED BY OTHER PEOPLE.

WHY DO PEOPLE HAVE TO WORK TO EARN MONEY?

Record the student's response(s) on the Record Sheet.

WHAT ARE SOME OF THE PERSONAL REASONS WHY PEOPLE WORK?

Record the student's response(s) on the Record Sheet.

CAN YOU GIVE ME SOME REASONS WHY WORK IS IMPORTANT TO SOCIETY?

(Make sure that the student has not mistaken "society" for "high society.")

Record the student's response(s) on the Record Sheet.

2. Tentative Occupational Preference(s)

WHAT KIND OF WORK WOULD YOU LIKE TO DO IN THE FUTURE?

Record the student's response(s) on the Record Sheet.

*If the student indicates more than one occupation, then ask:

WHICH KIND OF WORK WOULD YOU LIKE BEST?

Record the student's response(s) on the Record Sheet.

(If the student cannot decide which occupation he likes best, the interviewer will pick one.)

3. Interest, Ability, and Value

WHY WOULD THIS KIND OF WORK BE INTERESTING TO YOU?

Record the student's response(s) on the Record Sheet.

---

*If the student cannot indicate his interest(s) that the job might satisfy, then say:

A PERSON MAY CHOOSE TO BE A NURSE, BECAUSE SHE LIKES TO HELP PEOPLE. CAN YOU TELL WHY YOU WOULD LIKE TO BE A ______________________?
(first job preference)

Record the student's response(s) on the Record Sheet.

Then ask:

WHAT THINGS CAN YOU DO WELL THAT WOULD HELP YOU BE A GOOD____________________?
(first job preference)

Record the student's response(s) on the Record Sheet.

Then say:

TELL ME THE THINGS THAT ARE IMPORTANT TO YOU WHEN YOU CHOOSE A JOB?

Record the student's response(s) on the Record Sheet.

WOULD THE JOB OF A ______________ GIVE YOU THESE IMPORTANT THINGS? WHY?

Record the student's response(s) on the Record Sheet.

4. Job Information

WHERE COULD YOU FIND OUT MORE INFORMATION ABOUT THIS KIND OF WORK?

Record the student's response(s) on the Record Sheet.

WHAT KIND OF EDUCATION OR TRAINING WOULD YOU NEED TO BECOME A ________________?
(first occupational choice)

Record the student's response(s) on the Record Sheet.

WHERE COULD YOU OBTAIN THAT TRAINING OR EDUCATION?

Record the student's response(s) on the Record Sheet.

HAVE YOU WRITTEN TO OR VISITED ANY OF THOSE PLACES?

Record the student's response(s) on the Record Sheet.

WHERE COULD YOU OBTAIN FINANCIAL AID TO GET THE TRAINING OR EDUCATION YOU NEED?

Record the student's response(s) on the Record Sheet.

5. Current School Program

WHAT COURSES WILL YOU TAKE OR HAVE YOU TAKEN WHICH WOULD HELP YOU TO BECOME A ____________________?
(first occupational choice)

Record the student's response(s) on the Record Sheet.

HOW WOULD THESE COURSES HELP YOU TO BECOME

A ________________________?
(first occupational choice)

Record the student's response(s) on the Record Sheet.

IF YOU COULD CHANGE YOUR SCHOOL PROGRAM, WHAT CHANGES WOULD YOU MAKE TO BETTER PREPARE YOU TO BECOME A ________________________?
(first occupational choice)

Record the student's response(s) on the Record Sheet.

* If the student thinks there is no need for changes, ask him to explain.

Record the student's response(s) on the Record Sheet.

6. Alternative Occupational Preferences

IF IT DOESN'T WORK OUT FOR YOU TO BE A ________________________,
(first occupational choice)

WHAT OTHER OCCUPATION(S) WOULD YOU BE INTERESTED IN?

Record the student's response(s) on the Record Sheet.

APPENDIX AA
RECORD SHEET
OCCUPATIONAL DEVELOPMENT INVENTORY — SENIOR HIGH LEVEL
Part IV: Occupational Planning

Student's Name__________________________ Grade Level__________________________

School District__________________________ School Building__________________________

Interviewer__________________________ Date__________________________

RECORD ANSWERS FOR ALL SECTIONS OF PART IV ON THIS SHEET.

Section 1 — Reasons for Working

List the reason(s) for working the student gave.

Financial Reasons:
1.
2.
3.
4.

Personal Reasons:
1.
2.
3.
4.

Societal Reasons:
1.
2.
3.
4.

Section 2 — Tentative Occupational Preference(s)

List the kind(s) of work the student indicated he would like to do.

1.
2.
3.

Circle the kind of work the student liked best.

Star the kind of work selected by the interviewer if the student was unable to decide which one he liked best.

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Section 3 — Interest, Ability, and Value

List the reason(s) the student gave for being interested in the chosen (circled or starred) kind of work.

1.
2.
3.

List the student's reason(s) why he would be good at the chosen (circled or starred) kind of work.

1.
2.
3.

List the things the student considers important when he chooses a job.

1.
2.
3.

Record the student's response "yes" or "no" and his rationale.

Yes ☐ No ☐	1. 2. 3.

Section 4 — Job Information

List the sources the student named for getting more information about this kind of work.

1.
2.
3.

List the kind of education or training needed for the chosen (circled or starred) kind of work.

1.
2.
3.

List the places the student gave where he could obtain the training or education for the chosen (circled or starred) kind of work.

1.
2.
3.

Check (✓) whether the student has written or visited the above places.

NO	WRITTEN OR VISITED	WRITTEN AND VISITED

List the sources the student gave where he could obtain financial aid.

1.
2.
3.

Section 5 — Current School Program

List the courses the student will take or has taken which would help in his chosen (circled or starred) kind of work. List the reasons the student gave why the above courses would help in his chosen (circled or starred) kind of work.

School Course	Reasons
1.	
2.	
3.	
4.	
5.	
6.	

Check (✓) whether the student would or would not make changes in his school program.

change ☐ no change ☐

List the changes the student indicated he would make in his school program, or the reasons he would make no changes.

1.
2.
3.

Section 6 — Alternative Occupational Preferences

List the alternative occupations the student gave.

1.
2.
3.

If you have any comments regarding this student, make them in the space below:

APPENDIX AB

Scoring Procedures for Part IV
Senior High Section
Occupational Development Inventory

In scoring Part IV of the Senior High section of the Occupational Development Inventory it is important that you take into consideration the relative unsophistication of the learner. Students who were interviewed were from the eleventh, and twelfth grades. Also, in scoring responses, you should not consider the grammatical expertise of the students being interviewed nor the spelling accuracy of the interviewers. The interviewers attempted to measure the students achievement of certain objectives, not the student's verbal ability.

Please write all of your scores for the sections of the interview described here on the scoring sheet provided. Make sure that the label on the scoring sheet corresponds to the student sheet you are scoring. Now you may begin to score Part IV-Occupational Planning.

Section 1 - Reasons for working

This section attempts to gather information on three objectives. Students must provide evidence of their understanding of the importance of work from the standpoint of economic or financial necessity, human (personal) need, and social value.

Scoring: Responses in this section concerning financial need, personal needs, and the value of work to society, will be scored separately. First score the responses related to financial reasons in the following manner:

0 = no response, or non-relevant response

1, 2, . . . = number of relevant answers

Next, score the personal reasons provided by the student, using the same scoring scheme. Finally, score the responses related to why work is important to society, using the same scoring scheme.

Now turn to the second page of the Interview Record Sheet.

Section 3 - Interest, ability, value

The student's chosen work is listed (starred or circled) back on the last box of page 1 of the Record Sheet. You will need to refer to it to score this section. If there is no occupation listed or if several are listed but none are designated (starred or circled) as the chosen work, then do not score this section nor the remainder of the interview.

a) The student's reason(s) for being interested in his chosen work can be found in the box at the top of page 2. Reasons should be scored in terms of the level of conceptualization expressed in the responses.

The following scoring scheme will be used in scoring responses:

0 = no reason, completely irrelevant response, doesn't know

1 = it's fun, it looks like fun, it makes you feel good, thinks it would be nice

2 = modeling someone else; i.e., a friend, an aunt, an uncle, a parent, a sibling, a hero figure

3 = pragmatic reasons; fulfilling basic needs of self and others (i.e., the need for food, clothing and shelter, physiological needs, social needs)

4 = fulfilling self (but on a higher level than basic needs); i.e., for good of man, self-actualization, strongly related to work values or interests of those in that field

If the student provides several responses that could receive different scores, the response yielding the highest score should be used as the only score for this section.

b) The student's reason(s) why he would be good at his chosen work are listed in the second box on the page. Responses will be scored in the following manner:

0 = no response, doesn't know why, answer not relevant

1 = likes it, or general liking category

2 = vicarious experience

3 = direct experience, or learning to do the job or a skill required by the job

c) Important factors in choosing a job and whether or not the student's occupation will provide these important things will be scored as a unit.

In scoring this part, use the response in the fourth box on the page. Use the following scoring scheme:

0 = a "no" answer, or a "yes" answer with no rationale or an illogical rationale

1, 2, 3, . . . = number of logical reasons supporting his answer that his chosen occupation will provide the things he considers important

Section 4 - Job information

Students are supposed to list sources of additional information about their chosen occupation. The following scheme will be used in scoring this section:

0 = no response, or an inaccurate or irrelevant response

1, 2, 3, . . . = number of accurate or relevant sources of information

Students must indicate their knowledge of the minimum level of education needed for their chosen occupation. The responses for this section (found in the last box of page 2) will be scored using the following scheme:

0 = no response, minimum level of education set too low (e.g., a high school education to become a medical doctor)

1 = accurate response(s), at least the minimum education requirements mentioned (e.g., medical school for an M. D.)

Now turn to page 3 of the Record Sheet.

The places the student gave where he could obtain the training or education needed for his chosen work are presented in the box at the top of the page. Use the following scheme to score responses:

0 = no accurate response

1, 2, 3, . . . = number of accurate responses

Next, whether the student has written or visited the places he has mentioned will be scored in the following manner:

0 = neither written nor visited

1 = written to and/or visited

Next, the sources of financial support indicated by the students (in the third box on the page) will be scored in the following manner:

0 = no accurate or relevant source

1, 2, 3, . . . = number of accurate or relevant sources

Section 5 - Current school program

Each school course listed by the student and the reason it will be or was helpful are scored as a single item using the following scheme:

0 = no reasons, or no relevant reason

1 = relevant reason why the course was or will be helpful

Next, the rationale why a student would or would not wish to make changes in his school program will be scored using the following scheme:

0 = no relevant reasons

1, 2, 3, . . . = number of relevant reasons

The score for this section will be added to the number of 1's for the school subjects section to get a total score for Section 5.

Turn to page 4.

Section 6 - Alternative occupational preferences

Students in this section were required to provide alternative occupations consistent with their interests, values, and capabilities. Score responses to this section using the following scoring scheme:

0 = no alternative or no valid alternative (one that is consistent with the things he or she consider important when he or she chooses a job)

1, 2, 3, . . . = number of valid alternatives

APPENDIX AC

Parent's Questionnaire for the Comprehensive Career Education Development Project (1973)

Prepared by: Evaluation and Testing Department
Educational Research Council of America

Name____________________________ Date________________

Student's name________________________________

School__________________________ Grade Level________

This questionnaire is to find out how you feel about the Comprehensive Career Education Development Project. For each question, please check (✓) the answer that is true for you.

		YES	SOMEWHAT	NO
1.	Have you heard of the Comprehensive Career Education Development Project?	☐	☐	☐
2.	Do you know the goals of the project?	☐	☐	☐
3.	Do you think the project will take too much time away from your child's other school work?	☐	☐	☐
4.	Do you think the project will be helpful to students who plan to go to college?	☐	☐	☐
5.	Do you think the project will be helpful to students who do not plan to go to college?	☐	☐	☐
6.	Do you think parents should have more information about the project?	☐	☐	☐
7.	Do you think the project will help your child learn about jobs in the adult world?	☐	☐	☐
8.	Do you think the project will help your child choose his or her job wisely in the future?	☐	☐	☐

		YES	NO
9.	Do you have any idea what job you would like your child to have in the future?	☐	☐

10. If you checked "yes," please write the name of the job in this blank:________________________

If you have any comments, please write them on the back of this page.

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APPENDIX AD

Parent's Questionnaire for the Comprehensive Career Education Development Project (1975)

Prepared by: Evaluation and Testing Department
Educational Research Council of America in
Cooperation with The Muskegon Public Schools

Name______________________________ Date______________

Student's name______________________________

School______________________________ Grade Level ____________

The purpose of this questionnaire is to gather information concerning your feelings toward the Comprehensive Career Education Development Project in the Muskegon and Muskegon Heights Public Schools. For each question, please check (✓) the answer that is true for you.

		YES	SOMEWHAT	NO
1.	Have you heard of the Comprehensive Career Education Development Project?	☐	☐	☐
2.	Have you been informed of the goals of the project?	☐	☐	☐
3.	Do you think the project has taken too much time away from your child's other school work?	☐	☐	☐
4.	Do you think the project will be helpful to students who plan to go to college?	☐	☐	☐
5.	Do you think the project will be helpful to students who do not plan to go to college?	☐	☐	☐
6.	Do you think parents should have more information about the project?	☐	☐	☐
7.	Do you think the project will help your child learn about jobs in the adult world?	☐	☐	☐
8.	Do you think the project will help your child choose his or her job wisely in the future?	☐	☐	☐

		YES	NO
9.	Do you have any idea what job you would like your child to have in the future?	☐	☐

0. If you checked "yes," please write the name of the job in this blank: ______________________________

If you have any comments, please write them on the back of this page.

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APPENDIX AE

INFORMATION SHEET

1. Name____________________________

2. Sex Boy ☐ Girl ☐

3. Birth date____________________________

4. School____________________________

5. Grade level____________________________

6. School district____________________________

7. Live with Mother and Father ☐ Father ☐ Mother ☐ Other ☐

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